Aug. 1924.

Frank Morris
694 Aylmer St.
Peterborough, Ont.
Canada

NUNC COGNOSCO EX PARTE



TRENT UNIVERSITY
LIBRARY

PRESENTED BY

Mrs. H.H. Graham

Frank Norris
from Ed. A. Saun
& Mrs Saun

Aug. 1924.

Gift of Mrs. F. K. Norris

AN ENUMERATION OF THE ORCHIDS OF THE UNITED STATES AND CANADA

AN ENUMERATION OF THE

ORCHIDS OF THE UNITED STATES AND CANADA

PREPARED FOR THE

AMERICAN ORCHID SOCIETY

By Oakes Ames



BOSTON

THE AMERICAN ORCHID SOCIETY

1924

D. B. UPDIKE · THE MERRYMOUNT PRESS · BOSTON

QK495.S4A5

THE AMERICAN ORCHID SOCIETY

OFFICERS

PRESIDENT

Albert C. Burrage, 85 *Ames Bldg.*, *Boston*, *Mass.*

VICE-PRESIDENTS

Theodore H. Wickwire, Jr., 1217 *Delaware Ave.*, *Buffalo*, *N. Y.*
W. A. Manda, *South Orange*, *N. J.*
Oakes Ames, *North Easton*, *Mass.*
George T. Moore, *Missouri Botanical Garden*, *St. Louis*, *Mo.*
Mrs. Pierre S. Du Pont, *Kennett Square*, *Pa.*

TREASURER

Louis Burk, *Gerard Ave. and Third St.*, *Philadelphia*, *Pa.*

SECRETARY

Alfred J. Loveless, *Lenox*, *Mass.*

TRUSTEES

George E. Baldwin, *Mamaroneck*, *N. Y.*
John E. Lager, *Summit*, *N. J.*
Joseph Manda, 191 *Valley Road*, *West Orange*, *N. J.*
Edward Roehrs, *Rutherford*, *N. J.*
Thomas Roland, *Nahant*, *Mass.*
Edwin S. Webster, *Chestnut Hill*, *Mass.*
Oliver Lines, 293 *Pomeroy Ave.*, *Pittsfield*, *Mass.*
F. E. Dixon, *Elkins Park*, *Pa.*
David S. Vesey, *Fort Wayne*, *Ind.*
Miss M. R. Case, *Hillcrest Gardens*, *Weston*, *Mass.*
Clement Moore, 125 *Euclid Ave.*, *Hackensack*, *N. J.*

38047

Digitized by the Internet Archive
in 2019 with funding from
Kahle/Austin Foundation

https://archive.org/details/enumerationoforc0000ames

PREFACE

IN the following enumeration of the orchids of the United States and Canada, an attempt has been made to include every valid species with its variants, and thus to present, for the first time, a comprehensive survey of our orchid flora.

Except in a few cases where doubt still prevails as to what was the type of a species and where different opinions are held as to the reliability of an author's conclusions, the rules of nomenclature sanctioned by the International Botanical Congress held in Vienna in 1905 have been closely observed. Recent changes in the names of our native orchids have been rejected when these rest on purely bibliographical data that never can be verified by a study of trustworthy botanical evidence. As examples it is only necessary to cite *Cypripedium hirsutum* and *C. bulbosum* of Miller's Gardeners Dictionary. The type specimens of these species are not extant. Regarding their identity there is a difference of opinion.

Complete agreement as to generic and specific limits is still lacking among systematic botanists and personal judgment continues to take a prominent part in the interpretation of our flora. If I have neglected proposals that call for segregation of the species of Habenaria and Spiranthes into smaller genera, I have been influenced by the belief that the evidence and trend of evolution should not be obscured or obliterated. I have been governed by the conviction that the multiplication of

small genera imposes a needless burden on those who are not specialists as well as on those who use taxonomy for practical purposes.

As a complete synonymy would burden the text and increase the length of the volume beyond reasonable limits, the salient synonymy has been given under each species.

It remains for me to express my thanks to F. Tracy Hubbard and to Charles Schweinfurth, who have been helpful assistants in the preparation of the work for the Press.

OAKES AMES

Bussey Institution for Applied Biology,
Harvard University,
February 2, 1924

AN ENUMERATION

&c.

ORCHIDACEAE (*Orchid Family*)

TERRESTRIAL or epiphytal herbs distinguished by perfect zygomorphic gynandrous flowers with 6-merous perianth adnate to the 1-celled inferior ovary, with innumerable ovules on three parietal placentae and with either one or two fertile anthers; the pollen granular or cohering in masses termed *pollinia*. Perianth usually of six segments, the outer three called sepals; of the inner series (petals) one segment usually complex in structure, for the most part different in form and coloration from the other segments, is called the *lip* or *labellum*. In the centre of the flower there is a fleshy structure technically termed the *column* or *gynostemium;* this structure is probably an outgrowth of the central axis and bears at or near its summit one anther (*Monandrae*) or two anthers (*Diandrae*). The column is diagnostic in the sure recognition of the Orchidaceae.

The column exhibits a wide range of variation. It is of basic importance in classification. The front of the column faces the labellum. Above its base, on the anterior surface, the more or less confluent stigmas are situated. The stigmatic area may be detected by the sticky or viscous substance to which the pollen adheres during pollination and fertilization. Above the stigmatic surface there is in many species a projection of the column which is technically known as the *rostellum*. This is a modified stigma and serves an important function in the pollination of orchids by insects.

The summit of the column in the majority of orchids is usually occupied by a cap-like or lid-like structure. This is the anther which is mobile or rarely immobile. The bed in which the anther rests is termed the *clinandrium.*

The consistency of the pollen of monandrous orchids is granular, mealy or waxy. When it is granular or mealy, the grains cohere lightly and readily fall apart if disturbed. When the pollinia are waxy, the grains cohere rather tenaciously to form lozenge-like, spherical or pyriform bodies which may be simple or appendaged. The number of pollinia is usually definite, and hence reliable, within limits, for the differentiation of genera.

The flowers of orchids are hermaphroditic in the genera of our range, often solitary, but usually few to many in simple or compound racemes; sometimes they are large and showy, but prevalently small and inconspicuous.

The fruit is a 1-celled capsule in the genera of our flora, containing countless scobicular seeds.

The stems of orchids exhibit a wide range of variation: they may be so much abbreviated that it is difficult to detect them; in tropical species they may attain to a height of ten or more feet; they may be slender and bear one or many leaves, or they may be much thickened to form globular, flask-shaped, ovoid or cylindrical structures which are technically termed *pseudobulbs.* Pseudobulbs may be monophyllous, diphyllous or polyphyllous. In several genera of the United States

and Canada the stems form *tubers* or *corms*. (Tipularia, Aplectrum, Triphora.)

Orchids exhibit three distinct types of vegetative structure: when the main axis grows steadily onward year after year (the accretions being at length indistinguishable) and bears flowers on lateral shoots, a *monopodium* is formed (*Monopodiales*); when the main axis is composed of annual portions of successive axes (*Sympodiales*), each one of which is terminated by an inflorescence, an *acranthous sympodium* is formed; when the axes are lateral and the shoot of the current year continues the main axis and stops short at the end of the growing period and does not terminate in an inflorescence, the flowers being borne on lateral shoots, a *pleuranthous sympodium* is formed. These types of vegetative behavior are used in classification.

The orchids constitute a cosmopolitan family which attains its highest development in the tropics of both hemispheres. Several hundred genera and not less than ten thousand species have been recognized of which forty-four genera and one hundred and forty-six species and four hybrids are natives of our range.

KEY TO THE GENERA

DIANDRAE. Fertile anthers 2, borne laterally on the column. Labellum an inflated sac or pouch which is never produced in front into a more or less expanded lamina. Sepals 3, the lateral ones (except in *Cypripedium arietinum*) normally coherent behind the labellum, so that the flower appears to be composed of five perianth segments. CYPRIPEDIUM.

MONANDRAE. Fertile anther 1. Labellum simple or complex, if saccate produced in front into a more or less expanded lamina, or if simply saccate, forming the uppermost segment of the perianth.

A. Anther terminal, persistent, attached by a broad base, immobile or inarticulate, not inserted on the column by a filament; distinctly 2-celled with the cells united by a broad connective. Pollinia attenuated to form distinct caudicles which emerge from the base of the erect cells of the anther. Labellum (not the sepals) developed posteriorly into a spur or saccate nectary. (BASITONAE.)

a. Viscid disc of the pollinia enclosed in a pouch-like structure of the rostellum. ORCHIS.

a. Viscid disc of the pollinia free. HABENARIA.

A. Anther terminal or posteriorly situated on the column, often affixed by a slender filament, often deciduous or coming away easily with the pollinia, rarely attached rigidly and hence immobile (as in *Triphora*). Base of the pollinia, or tip of the caudi-

cles when present, emerging from the apex of the anther. Labellum rarely produced into a spur or sac. (ACROTONAE.)

I. Pollinia readily disintegrating, granular, mealy or sectile, when cohering in masses never hard or waxy.

b. Stems scandent, elongated. VANILLA.

b. Stems not scandent.

B. Anther terminal, not inserted on the back of the column.

c. Leaves solitary or several, if in pairs distantly alternate; in *Arethusa* inconspicuous and not well developed until after the flowering season.

d. Anther mobile, not rigidly erect at the summit of the column.

e. Pollinia mealy, the grains not held together by elastic threads.

f. Labellum not saccate at the base.

g. Leaves solitary or alternate.

h. Labellum about 2 cm. long. POGONIA.

h. Labellum 3 cm. or more long. CLEISTES.

g. Leaves 5–6 in a whorl. ISOTRIA.

f. Labellum saccate at the base.

i. Leaves well developed, alternate, green. AMESIA.

i. Leaves weakly developed, apparently devoid of chlorophyll. SERAPIAS.

e. Pollinia held together by elastic threads.

j. Flowers several. CALOPOGON.

j. Flowers solitary. ARETHUSA.

d. Anther immobile, rigidly erect on a semiterete base. TRIPHORA.

c. Leaves opposite. LISTERA.

B. Anther posterior, inserted on the back of the column below the summit.

k. Stems unbranched, inflorescence simple, not forming a compound raceme.

l. Labellum posterior, forming the uppermost segment of the perianth.

m. Labellum inserted at or below the base of the column.

n. Lateral sepals adherent to the base of the labellum. PRESCOTTIA.

n. Lateral sepals free from the labellum. CRANICHIS.

m. Labellum inserted above the base of the column. PONTHIEVA.

l. Labellum anterior, forming the lowermost segment of the perianth.

o. Roots fasciculate at the base of the stem or sometimes only a single root present. Rhizome not distinctly creeping with roots at the nodes.

p. Column-foot short or obsolete, lateral sepals inserted obliquely on the ovary, shortly if at all decurrent. SPIRANTHES.

p. Column-foot elongated, lateral sepals decurrent on the ovary.

q. Lateral sepals forming a distinct mentum or chin. STENORRHYNCHUS.

q. Lateral sepals forming a slender spur. CENTROGENIUM.

o. Roots from the nodes of a creeping rhizome.

r. Leaves rosulate, basal. EPIPACTIS.

r. Leaves distinctly alternate. ERYTHRODES.

k. Stems usually branched, inflorescence a compound raceme. TROPIDIA.

I. Pollinia waxy forming definite masses in which the pollen grains cohere closely.

a. Flower-shoot terminal from a corm or a coralloid rhizome, or from a slender or pseudobulbous stem, often clasped by the sheathing base of a leaf.

b. Leaves, when developed, membranaceous, soft and pliable, wanting in *Corallorrhiza* and *Hexalectris*, represented at flowering time in *Tipularia* and often in *Aplectrum* by withered fragments or straggling fibres.

c. Rhizome not coralloid.

d. Leaves always present at flowering time on swollen members of the sympodium or rhizome.

e. Labellum not saccate.

f. Column abbreviated. MALAXIS.

f. Column elongated. LIPARIS.

e. Labellum saccate. CALYPSO.

d. Leaves absent at flowering time or present as dried and withered remains.

g. Labellum developed posteriorly into an elongated slender spur. TIPULARIA.

g. Labellum not developed into an elongated slender spur. APLECTRUM.

c. Rhizome coralloid.

h. Pollinia 8. HEXALECTRIS.

h. Pollinia 4. CORALLORRHIZA.

b. Leaves coriaceous or fleshy, always present on the flowering growths.

i. Column apodial or produced into a very short foot. Lateral sepals not triangular.

j. Pollinia 2–4.

k. Stems slender, always 1-leaved. PLEUROTHALLIS.

k. Stems pseudobulbous or slender, when slender bearing several alternate leaves.

l. Pseudobulbs or stems approximate, if otherwise flowers more than 2 in a distinct raceme. EPIDENDRUM.

l. Pseudobulbs widely separated on an elongated rhizome, flowers usually in pairs and sessile at the base of 2 approximate terminal leaves. HORMIDIUM.

j. Pollinia 8. BASIPHYLLAEA.

i. Column with a distinct foot, lateral sepals triangular forming a conspicuous mentum or chin. POLYSTACHYA.

a. Flower-shoot lateral on the leafy stem or pseudobulb, or from a contracted leafless stem that arises from spreading roots.

A. SYMPODIALES. Main axis composed of annual members of which each one terminates the year's growth.

m. Leaves convolute, pliable, not coriaceous.

n. Pollinia 8. LIMODORUM.

n. Pollinia 2–4.

o. Labellum forming a distinct sac between the lateral sepals. EULOPHIA.

o. Labellum not forming a sac between the lateral sepals. CYRTOPODIUM.

m. Leaves conduplicate, coriaceous, always present on the new growth.

p. Pseudobulbs well developed, 1-leaved at the summit. MACRADENIA.

p. Pseudobulbs or stems 2- or more leaved, often much abbreviated and inconspicuous.

q. Column simple, not biauriculate or bialate at or near the summit.

r. Sepals and petals ecaudate. IONOPSIS.

r. Sepals and petals caudate. BRASSIA.

q. Column biauriculate or bialate at or near the summit. ONCIDIUM.

A. MONOPODIALES. Main axis growing on year after year, not produced into distinct annual members. Leafless epiphytes with greenish roots.

s. Flowers minute, labellum entire or obscurely 3-lobed, not bifid at the apex.

t. Raceme laxly few-flowered. HARRISELLA.

t. Raceme densely many-flowered. CAMPYLOCENTRUM.

s. Flowers large and showy, labellum deeply bifid at the apex. POLYRRHIZA.

Epipactis

AMESIA *A. Nelson & Macbride*

1. Amesia gigantea (*Douglas*) *A. Nelson & Macbride* in Botanical Gazette, vol. 56, p. 472 (1913).

SYNONYMY:

Epipactis gigantea *Douglas* ex Hooker, Flora Boreali-americana, vol. 2, p. 202, pl. 202 (1839).

Epipactis americana *Lindley* in Annals and Magazine Natural History, ser. 1, vol. 4, p. 385 (1840).

Peramium giganteum *Coulter* in Contributions United States National Herbarium, vol. 2 (Botany Western Texas), p. 424 (1894).

Serapias gigantea *A. A. Eaton* in Proceedings Biological Society Washington, vol. 21, p. 67 (1908).

Helleborine gigantea *Druce* in Bulletin Torrey Botanical Club, vol. 36, p. 547 (1909).

COMMON NAME: Stream Orchis, Giant Helleborine, Chatterbox.

GEOGRAPHICAL DISTRIBUTION: Northern Mont., Wyo., Utah, Nev., Colo., B. C., Wash. to Calif., Tex., N. Mex. and Ariz. Also Mexico.

FLOWERING SEASON: June to August (rarely May).

ILLUSTRATION: Hooker, Flora Boreali-americana, vol. 2, pl. 202.

2. Amesia latifolia (*Hudson*) *A. Nelson & Macbride* in Botanical Gazette, vol. 56, p. 472 (1913).

SYNONYMY:

Serapias Helleborine α. latifolia *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 949 (1753).

Serapias latifolia *Hudson*, Flora Anglica, ed. 1, p. 341 (1762).

Epipactis latifolia *Allioni*, Flora Pedemontana, vol. 2, p. 152 (1785).

Epipactis Helleborine var. viridens *A. Gray* in Botanical Gazette, vol. 4, p. 206 (1879), not Crantz.

Epipactis Helleborine *S. Watson & Coulter* in A. Gray, Manual Botany Northern United States, ed. 6, p. 504 (1890), not Crantz.

Helleborine latifolia *Druce*, Dillenian Herbaria, p. 115 (1907).

COMMON NAME: Broad-leaved Epipactis.

GEOGRAPHICAL DISTRIBUTION: Que. (Montreal), Ont. (Toronto), N. Y. and Pa. Also Europe.

FLOWERING SEASON: July, August, and September (Montreal).

ILLUSTRATION: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 136 (488) (as *Epipactis latifolia*).

Note. American material referred to *Epipactis viridiflora* Reichenbach is clearly identical with this species. The status of the European material which Reichenbach described is at present doubtful, but apparently represents a color variant of *Amesia latifolia*.

APLECTRUM (*Nuttall*) *Torrey*

1. Aplectrum hyemale (*Muhlenberg*) *Torrey*, Compendium Flora Northern and Middle States, p. 322 (1826).

SYNONYMY:

Cymbidium hyemale *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 107 (1805).

Aplectrum spicatum *Britton, Sterns & Poggenberg*, Preliminary Catalogue Anthophyta and Pteridophyta New York, p. 51 (1888), not *Arethusa spicata* Walter.

? Aplectrum Shortii *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 305 (1901).

COMMON NAME: Putty Root, Adam and Eve.

GEOGRAPHICAL DISTRIBUTION: Vt. to Sask., Mass., Conn., N. Y., Del., D. C., south to N. C. and westward in O., Ky., Ind., Ill., Mich., Minn., Ia., Wisc. and Kans.

FLOWERING SEASON: May and June.

ILLUSTRATION: Torrey, Flora State of New York, vol. 2, pl. 127.

Var. pallidum (*House*) *Barnhart* in Torreya, vol. 4, p. 121 (1904).

SYNONYMY: Aplectrum spicatum var. pallidum *House* in Torreya, vol. 3, p. 54 (1903).

GEOGRAPHICAL DISTRIBUTION: N.Y. (Onondaga Co., Jamesville).

ARETHUSA [*Gronovius*] *Linnaeus*

1. Arethusa bulbosa *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 950 (1753).

COMMON NAME: Arethusa, Dragon's Mouth, Wild Pink.

GEOGRAPHICAL DISTRIBUTION: Nfd., N. S. and Ont.; New England, N. Y., N. J., Pa., O., Minn., Wisc., south to mountains of S. C.

FLOWERING SEASON: May and June (July and August in extreme north).

ILLUSTRATION: Botanical Magazine, pl. 2204; Loddiges, Botanical Cabinet, pl. 1170; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 43B.

Forma albiflora *Rand & Redfield*, Flora Mount Desert Island, p. 152 (1894).

GEOGRAPHICAL DISTRIBUTION: Me. (Mt. Desert).

Forma subcaerulea *Rand & Redfield*, Flora Mount Desert Island, p. 152 (1894).

GEOGRAPHICAL DISTRIBUTION: Me. (Mt. Desert).

BASIPHYLLAEA *Schlechter*

1. Basiphyllaea corallicola (*Small*) *Ames*, Schedulae Orchidianae, No. 7, p. 1 (1924).

SYNONYMY: Carteria corallicola *Small* in Torreya, vol. 10, p. 188 (1910).

COMMON NAME: Carter's Orchid.

GEOGRAPHICAL DISTRIBUTION: Fla. Also Bahama Islands.

FLOWERING SEASON: Late October to December.

BRASSIA *Lindley*

1. **Brassia caudata** (*Linnaeus*) *Lindley* in Botanical Register, vol. 10, pl. 832 (1824).

SYNONYMY: Epidendrum caudatum *Linnaeus*, Systema Naturae, ed. 10, vol. 2, p. 1246 (1759).

COMMON NAME: Long-tailed Brassia.

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, Trinidad, Mexico, and Central and South America.

ILLUSTRATION: Botanical Magazine, pl. 3451.

CALOPOGON *R. Brown*

1. **Calopogon barbatus** (*Walter*) *Ames*, Orchidaceae, fasc. 2, p. 272 (1908).

SYNONYMY:

Ophrys barbata *Walter*, Flora Caroliniana, p. 221 (1788).

Calopogon parviflorus *Lindley*, Genera and Species Orchidaceous Plants, p. 424 (1840).

Limodorum parviflorum *Nash* in Bulletin Torrey Botanical Club, vol. 22, p. 158 (1895).

Limodorum graminifolium *Small*, Flora Southeastern United States, ed. 1, p. 322 (1903).

COMMON NAME: Bearded Calopogon.

GEOGRAPHICAL DISTRIBUTION: N. C. to Fla.

FLOWERING SEASON: March and April (rarely February).

2. **Calopogon multiflorus** *Lindley*, Genera and Species Orchidaceous Plants, p. 425 (1840).

Synonymy:

Limodorum multiflorum *Mohr* in Bulletin Torrey Botanical Club, vol. 24, p. 23 (1897).

Limodorum pinetorum *Small* in Bulletin New York Botanical Garden, vol. 3, p. 421 (1905).

Common Name: Many-flowered Calopogon.

Geographical Distribution: Fla., Ala. and Miss.

Flowering Season: November to May.

Illustration: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 10.

3. Calopogon pallidus *Chapman*, Flora Southern United States, ed. 1, p. 457 (1860).

Synonymy: Limodorum pallidum *Mohr* in Bulletin Torrey Botanical Club, vol. 24, p. 23 (1897).

Geographical Distribution: N. C., S. C., Ga., Fla., Ala. and Miss.

Flowering Season: February to July.

4. Calopogon pulchellus (*Salisbury*) *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 204 (1813).

Synonymy:

Limodorum pulchellum *Salisbury*, Prodromus Horto Chapel Allerton, p. 8 (1796).

Calopogon tuberosus *Britton, Sterns & Poggenberg*, Preliminary Catalogue Anthophyta and Pteridophyta New York, p. 52 (1888), not *Limodorum tuberosum* Linnaeus.

Cathea tuberosa *Morong* in Bulletin Torrey Botanical Club, vol. 20, pp. 34, 121 (1893).

Limodorum tuberosum var. nanum *Nieuwland* in American Midland Naturalist, vol. 3, p. 130 (1913).

Common Name: Grass Pink, Pretty Calopogon, Tuberous-rooted Calopogon, Calopogon.

Geographical Distribution: Nfd., N.S., N.B., P.E.I. and Ont.; New England, N.Y., N.J., Pa., south to Fla., Ala., La., Tex. and westward to Minn. and Mo.

Flowering Season: April and May (in extreme south), late June and July, often August (in extreme north).

Illustration: Botanical Magazine, pl. 116; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 41A (both as *Limodorum tuberosum*).

Forma albiflorus (*Britton*) *Fernald* in Rhodora, vol. 23, p. 245 (1921).

Synonymy: Calopogon tuberosus forma albiflorus *Britton* in Bulletin Torrey Botanical Club, vol. 17, p. 125 (1890).

Geographical Distribution: Similar to that of the species.

Forma latifolius *St. John* in Proceedings Boston Society Natural History, vol. 36, p. 69, pl. 1, fig. 4 (1921).

Geographical Distribution: Nova Scotia.

Flowering Season: August.

Illustration: St. John in Proceedings Boston Society Natural History, vol. 36, pl. 1, fig. 4.

Var. Simpsonii (*Small*) *Ames*, Contribution to Knowledge Orchid Flora Southern Florida, p. 18 (1904).

Synonymy: Limodorum Simpsonii *Small*, Flora Southeastern United States, ed. 1, p. 322 (1903).

Common Name: Simpson's Calopogon, Simpson's Grass-pink, Southern Grass-pink.

Geographical Distribution: Florida.

Flowering Season: Spring and summer.

Illustration: Addisonia, pl. 124 (as *Limodorum Simpsonii*).

CALYPSO *Salisbury*

1. Calypso bulbosa (*Linnaeus*) *Oakes* in Thompson, History of Vermont, pt. 1, p. 200 (1842).

Synonymy:

Cypripedium bulbosum *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 951 (1753).

Cymbidium boreale *Swartz* in Nova Acta Regia Societas Scientiarum Upsaliensis, vol. 6, p. 76 (1799).

Calypso borealis *Salisbury*, Paradisus Londonensis, pl. 89 (1807).

Cytherea bulbosa *House* in Bulletin Torrey Botanical Club, vol. 32, p. 382 (1905).

Common Name: Calypso, Cytherea, Hider of the North.

Geographical Distribution: Lab. to Alaska, south to Me., Vt., N. Y., Mich., Minn., Idaho, Wyo., Colo., Wash., Ore., Calif. and Ariz. Also Europe and Asia.

Flowering Season: May to mid-June (in rare cases April or July).

Illustration: Hooker, Exotic Flora, vol. 1, pl. 12 (as *Calypso borealis*); Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 137 (489); House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 43A (as *Cytherea bulbosa*).

Forma occidentalis *Holzinger* in Contributions United States National Herbarium, vol. 3, p. 251 (1895).

Synonymy: Calypso occidentalis *Heller* in Bulletin Torrey Botanical Club, vol. 25, p. 193 (1898).

Geographical Distribution: Idaho.

CAMPYLOCENTRUM *Bentham*

1. Campylocentrum pachyrrhizum (*Reichenbach filius*) *Rolfe* in Orchid Review, vol. 11, p. 246 (1903).

Synonymy: Aëranthus pachyrrhizus *Reichenbach filius* in Flora, vol. 48, p. 279 (1865).

Geographical Distribution: Fla. Also West Indies, Trinidad and French Guiana.

Flowering Season: March.

CENTROGENIUM *Schlechter*

1. **Centrogenium setaceum** (*Lindley*) *Schlechter* in Beihefte Botanischen Centralblatt, vol. 37, Abteilung II, p. 453 (1920).

Synonymy: Pelexia setacea *Lindley*, Genera and Species Orchidaceous Plants, p. 482 (1840).

Common Name: Spurred Neottia.

Geographical Distribution: Fla. Also Bahama Islands, West Indies and Trinidad.

Flowering Season: January and February.

Illustration: Botanical Magazine, pl. 3403 (as *Neottia calcarata*).

CLEISTES *L. C. Richard*

1. **Cleistes divaricata** (*Linnaeus*) *Ames*, Orchidaceae, fasc. 7, p. 21 (1922).

Synonymy:

Arethusa divaricata *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 951 (1753).

Pogonia divaricata *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 203 (1813).

Geographical Distribution: N. J. (rare), Del., N. C., south to Fla. and Ala.

Flowering Season: April and May (in Fla.), June (in Del.) to July (in N. J.).

Illustration: Ames, Orchidaceae, fasc. 7, pl. 108.

CORALLORRHIZA [*Haller*] *R. Brown*

1. Corallorrhiza maculata *Rafinesque* in American Monthly Magazine, vol. 2, p. 119 (1817).

Synonymy:

Cladorhiza maculata *Rafinesque* in American Monthly Magazine, vol. 1, p. 429 (1817).

Corallorrhiza multiflora *Nuttall* in Journal Academy Natural Sciences Philadelphia, vol. 3, p. 138, pl. 7 (1823).

Common Name: Large Coral Root, Many-flowered Coral Root, Spotted Coral-root.

Geographical Distribution: Nfd., N. S., N. B., P. E. I., Que., Ont., Sask. and B. C.; New England, N. Y., Pa., Va., N. C.; Mich. west to Wash., Ore. and Calif.

Flowering Season: July to September (rarely June).

Illustration: Hooker, Exotic Flora, vol. 3, pl. 174 (as *C. multiflora*).

Var. flavida *Cockerell* in Torreya, vol. 16, p. 232 (1916) and *H. H. Bartlett* in Rhodora, vol. 24, p. 147 (1922).

Synonymy: Corallorrhiza multiflora var. flavida *Peck* in Fifteenth Annual Report State Botanist State of New York, p. 126 (1897).

Geographical Distribution: N. Y., Md., Mich., Neb. and Mont.

Flowering Season: August and September.

Var. intermedia *Farwell* in Nineteenth Report Michigan Academy Science, p. 247 (1917).

Synonymy: Corallorrhiza maculata var. fusca *H. H. Bartlett* in Rhodora, vol. 24, p. 147 (1922).

Geographical Distribution: Mich. (Keweenaw Co.).

Flowering Season: July.

Var. occidentalis (*Lindley*) *Cockerell* in Torreya, vol. 16, p. 232 (1916).

Synonymy:

Corallorrhiza multiflora β. occidentalis *Lindley*, Genera and Species Orchidaceous Plants, p. 534 (1840).

Corallorrhiza Grabhamii *Cockerell* in Torreya, vol. 3, p. 140 (1903).

Corallorrhiza Leimbachiana *Suksdorf* in Allgemeine Botanische Zeitschrift, vol. 12, p. 42 (1906).

Corallorrhiza multiflora var. sulphurea *Suksdorf* in Allgemeine Botanische Zeitschrift, vol. 12, p. 42 (1906).

Geographical Distribution: Wash. (Klickitat Co.), Colo., Calif., N. Mex. and Ariz.

Flowering Season: July and August (rarely May and June).

Var. punicea *H. H. Bartlett* in Rhodora, vol. 24, p. 147 (1922).

Geographical Distribution: Michigan.

2. Corallorrhiza Mertensiana *Bongard* in Mémoires Académie Impériale Sciences St. Pétersbourg, ser. 6, Sciences mathématiques, physiques et naturelles, vol. 2, p. 165 (1832).

Common Name: Mertens' Coral-root.

Geographical Distribution: B. C., Alaska, Mont., Wyo., Idaho, Wash., Ore. and Calif.

Flowering Season: June to August.

Illustration: Abrams, Illustrated Flora Pacific States, vol. 1, p. 484, fig. 1182.

3. Corallorrhiza odontorhiza (*Willdenow*) *Nuttall*, Genera North American Plants, vol. 2, p. 197 (1818).

Synonymy:

Cymbidium odontorhizon *Willdenow*, Species Plantarum, vol. 4, p. 110 (1805).

Corallorrhiza micrantha *Chapman*, Flora Southern United States, ed. 1, p. 454 (1860).

Common Name: Small Coralroot, Late Coralroot, Small-flowered Coral-root.

Geographical Distribution: Southern Me., Vt., Mass., R. I., Conn., N. Y. and Pa., south to Fla.; Ind., Ill., and Mo.

Flowering Season: Late August to October.

Illustration: Torrey, Flora of New York, vol. 2, pl. 126.

4. Corallorrhiza striata *Lindley*, Genera and Species Orchidaceous Plants, p. 534 (1840).

Synonymy:

Corallorrhiza Macraei *A. Gray*, Manual Botany Northern United States, ed. 2, p. 453 (1856).

Corallorrhiza Bigelovii *S. Watson* in Proceedings American Academy, vol. 12, p. 275 (1877).

Corallorrhiza Vreelandii *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 271 (1901).

? Corallorrhiza ochroleuca *Rydberg* in Bulletin Torrey Botanical Club, vol. 31, p. 402 (1904). (Cf. Note.)

Common Name: Striped Coral Root, Bigelow's Coral-root.

Geographical Distribution: Que. (two records), Ont. west to B. C. and south to Mich., Minn., Wisc., Wyo., Colo., Utah, Wash., Ore. and Calif.

Flowering Season: Late April to July (rarely August).

Illustration: Torrey in Reports Explorations and Surveys Railroad from Mississippi River to Pacific Ocean, vol. 4, p. 152, pl. 25 (as *C. Macraei*).

Note. Apparently *Corallorrhiza ochroleuca* Rydberg is only a color form of this species.

5. Corallorrhiza trifida *Chatelain*, Specimen Inaugurale de Corallorhiza, p. 8 (1760).

Synonymy:

Ophrys Corallorhiza *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 945 (1753).

Corallorrhiza innata *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 209 (1813).

Corallorrhiza verna *Nuttall* in Journal Academy Natural Sciences Philadelphia, vol. 3, p. 136, pl. 7 (1823).

Corallorrhiza Corallorrhiza *Karsten*, Deutsche Flora Pharmaceutisch-medicinische Botanik, p. 448, fig. 264 (1883) and *MacMillan*, Metaspermae Minnesota Valley, p. 174 (1892).

Corallorrhiza Vancouveriana *Finet* in Bulletin Société Botanique France, vol. 56, p. 100, pl. 1, figs. 38–43 (1909).

Corallorrhiza Corallorrhiza var. coloradensis *Cockerell* in Torreya, vol. 16, p. 231 (1916).

Common Name: Early Coral Root.

Geographical Distribution: Nfd., N. S., N. B., P. E. I., Que., Ont., Sask., Alberta, B. C. and Alaska; Me., N. H., Vt., Mass., Conn., N. Y., N. J., Pa., O., Mich., Wisc., Mont., Colo., Idaho, Wash. and Ore. Also Eurasia.

Flowering Season: May to July (sometimes August in extreme north).

Illustration: Sowerby, English Botany, vol. 22, pl. 1547 (as *Ophrys Corallorhiza*).

Note. A variety of this species with light yellowish green flowers has been described under the name:

Corallorrhiza innata var. virescens *Farr* in Contributions Botanical Laboratory University Pennsylvania, vol. 2, p. 425 (1904).

Geographical Distribution: Alberta (Banff), B. C. (Field).

6. **Corallorrhiza Wisteriana** *Conrad* in Journal Academy Natural Sciences Philadelphia, vol. 6, p. 145 (1829).

Synonymy: Corallorrhiza odontorhiza *Chapman*, Flora Southern United States, ed. 1, p. 454 (1860), not Nuttall.

Common Name: Wister's Coral Root.

Geographical Distribution: Ga., Fla., Ala., Tex., Tenn., Ind. and Mo. Also reported from Pa., Del. and O.

Flowering Season: February to May.

Illustration: Ames, Orchidaceae, fasc. 1, pl. 6.

CRANICHIS *Swartz*

1. Cranichis muscosa *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 120 (1788).

Geographical Distribution: Fla. Also West Indies, Trinidad and Costa Rica (*fide* Schlechter). Reported from the Bahama Islands.

Flowering Season: December to March (in Fla.).

Illustration: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 3.

CYPRIPEDIUM *Linnaeus*

1. Cypripedium acaule *Aiton*, Hortus Kewensis, ed. 1, vol. 3, p. 303 (1789).

Synonymy:

Cypripedium humile *Salisbury* in Transactions Linnean Society, vol. 1, p. 79, pl. 3, fig. 4 (1791).

Fissipes acaulis *Small*, Flora Southeastern United States, ed. 1, p. 311 (1903).

Fissipes hirsuta *Farwell* in Druggists Circular, vol. 61, p. 230 (1917).

Cypripedium hirsutum *Miller* according to Farwell in Druggists Circular, vol. 61, p. 230 (1917), in synonymy.

Common Name: Pink Lady's Slipper, Pink Moccasin Flower, Stemless Lady's Slipper, Two-leaved Lady's Slipper, Dwarf Umbil, Noah's Ark, Valerian (in New Hampshire), Whippoor-will Shoe (in Connecticut), Squirrel Shoes (the flowers), Purple Slipper.

GEOGRAPHICAL DISTRIBUTION: Nfd., N. S., N. B., P. E. I., Que. west to Winnipeg and Minn.; New England, N. Y., N. J., Pa., O. and Ind., south to N. C. and Tenn.

FLOWERING SEASON: May and June (rarely April; sometimes July in the north).

ILLUSTRATION: Botanical Magazine, pl. 192; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 33 and fig. VI (as *Fissipes acaulis*).

Forma albiflorum *Rand & Redfield*, Flora Mount Desert Island, p. 154 (1894).

SYNONYMY:

Cypripedium acaule var. album *Ballif* in Lindenia, vol. 4, p. 96 (1888), *nomen*.

GEOGRAPHICAL DISTRIBUTION: Northern portion of range of the species.

2. Cypripedium arietinum *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 222 (1813).

SYNONYMY: Criosanthes arietina *House* in Bulletin Torrey Botanical Club, vol. 32, p. 374 (1905).

COMMON NAME: Ram's Head Lady's Slipper, Ram's Head Cypripedium, Chandler's Cypripedium.

GEOGRAPHICAL DISTRIBUTION: Que. to Manitoba, south to Me., N. H., Vt., Mass., N. Y., Mich. and Minn.

FLOWERING SEASON: May and June.

ILLUSTRATION: Botanical Magazine, pl. 1569; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 32B and fig. V (as *Criosanthes arietina*).

3. Cypripedium californicum *A. Gray* in Proceedings American Academy, vol. 7, p. 389 (1868).

COMMON NAME: California Lady's Slipper.

GEOGRAPHICAL DISTRIBUTION: Ore. and Calif.

FLOWERING SEASON: Late May to July.

ILLUSTRATION: Botanical Magazine, pl. 7188.

4. **Cypripedium candidum** *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 142 (1805).

SYNONYMY: Calceolus candidus *Nieuwland* in American Midland Naturalist, vol. 3, p. 117 (1913).

COMMON NAME: Small White Lady's Slipper, White Frauenschuh, Moccasin Flower.

GEOGRAPHICAL DISTRIBUTION: N.Y. and N.J. to southern Minn. and northeastern Neb., southward to Mo. and Ky.

FLOWERING SEASON: May and June.

ILLUSTRATION: Botanical Magazine, pl. 5855; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 29.

5. **Cypripedium fasciculatum** *Kellogg* ex S. Watson in Proceedings American Academy, vol. 17, p. 380 (1882).

SYNONYMY:

Cypripedium pusillum *Rolfe* in Kew Bulletin, 1892, p. 211 (1892).

Cypripedium fasciculatum var. pusillum *Hooker filius* in Botanical Magazine, pl. 7275 (1893).

Cypripedium Knightae *A. Nelson* in Botanical Gazette, vol. 42, p. 48 (1906).

COMMON NAME: Brownie Lady's Slipper, Clustered Lady's Slipper.

GEOGRAPHICAL DISTRIBUTION: Mont., Colo. and Utah, west to Wash., Ore. and Calif.

FLOWERING SEASON: May to July (August on high peaks).

ILLUSTRATION: Botanical Magazine, pl. 7275 (as var. *pusillum*).

6. **Cypripedium guttatum** *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 251 (1800).

Synonymy: Cypripedium Yatabeanum *Makino* in Tokyo Botanical Magazine, vol. 13, p. 91 (1899).

Geographical Distribution: B. C. to Alaska and Aleutian Islands. Also Siberia and Japan.

Flowering Season: June to August.

Illustration: Botanical Magazine, pl. 7746.

7. **Cypripedium montanum** *Douglas* ex Lindley, Genera and Species Orchidaceous Plants, p. 528 (1840).

Synonymy: Cypripedium occidentale *S. Watson* in Proceedings American Academy, vol. 11, p. 147 (1876).

Common Name: Mountain Lady's Slipper.

Geographical Distribution: B. C., Vancouver Island; Mont., Idaho, Wash. south to Calif.

Flowering Season: May to July.

Illustration: Botanical Magazine, pl. 7319.

8. **Cypripedium parviflorum** *Salisbury* in Transactions Linnean Society, vol. 1, p. 77, pl. 2, fig. 2 (1791).

Synonymy:

Cypripedium luteum *Rafinesque*, Medical Flora, vol. 1, p. 140, pl. 30 (1828).

Cypripedium bifidum *Rafinesque* in Atlantic Journal, vol. 1, p. 178 (1833).

Cypripedium hirsutum var. parviflorum *Rolfe* in Orchid Review, vol. 15, p. 184 (1907).

Calceolus parviflorus *Nieuwland* in American Midland Naturalist, vol. 3, p. 118 (1913).

Cypripedium bulbosum var. parviflorum *Farwell* in Fifteenth Report Michigan Academy Science, p. 170 (1913).

Common Name: Smaller Yellow Lady's Slipper, Small Flowered Lady's Slipper, Water Stealer (*Amah Toskese*), Lesser-flowered Lady's Slipper.

Geographical Distribution: Anticosti, Nfd., Que., Ont., Manitoba, Sask., Alberta and B.C.; New England, westward to Mich., Wisc., Ia., Mont., Utah and Wash., southward to Ga., O., Ill. and Mo.

Flowering Season: May to July.

Illustration: Botanical Magazine, pl. 3024.

Var. pubescens (*Willdenow*) *Knight* in Rhodora, vol. 8, p. 93 (1906).

Synonymy:

Cypripedium Calceolus *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 951 (1753), in part.

Cypripedium flavescens *De Candolle* in Redouté, Liliacées, vol. 1, pl. 20 (1802).

Cypripedium pubescens *Willdenow*, Hortus Berolinensis, vol. 1, pl. 13 (1804).

Cypripedium parviflorum *Sims* in Botanical Magazine, pl. 911 (1806), not Salisbury.

Cypripedium hirsutum *Miller* according to Morong in Memoirs Torrey Botanical Club, vol. 5, p. 121 (1894) and according to Fox in Minnesota Botanical Studies Bulletin 9, p. 442, pl. 25 (1895).

Cypripedium veganum *Cockerell & Barker* in Proceedings Biological Society Washington, vol. 14, p. 178 (1901).

Calceolus hirsutus *Nieuwland* in American Midland Naturalist, vol. 3, p. 118 (1913).

Cypripedium bulbosum *Miller* according to Farwell in Fifteenth Report Michigan Academy Science, p. 170 (1913). (Cf. Note.)

Cypripedium bulbosum var. flavescens *Farwell* in Fifteenth Report Michigan Academy Science, p. 170 (1913).

Cypripedium pubescens var. Makasin *Farwell* in Twentieth Report Michigan Academy Science, p. 198 (1918).

Cypripedium Makasin *Farwell* in Twentieth Report Michigan Academy Science, p. 198, in text (1918).

COMMON NAME: Larger Yellow Lady's Slipper, Large Yellow Lady's Slipper, Noah's Ark, Whippoorwill Shoe, Yellow Downy Lady's Slipper, Downy Lady's Slipper, Yellow Lady's Slipper, Golden Slipper.

GEOGRAPHICAL DISTRIBUTION: Que., south to N. C. and Ala. (one record) and westward to base of Rocky Mts.; Manitoba and B. C.; N. Y., Mich., Minn., O., Ill., Mo., Wisc. and N. Mex.

FLOWERING SEASON: Late April (in Va.), May to July, and August (in far north).

ILLUSTRATION: Botanical Magazine, pl. 911 (as *C. parviflorum*); House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 31 (as *C. pubescens*).

Note. There seems little doubt that *Cypripedium bulbosum* Miller, Gardeners Dictionary, ed. 8, Cypripedium no. 3 (1768), is either *C. parviflorum* or *C. parviflorum* var. *pubescens*. No type of Miller's species is extant, and as there is great uncertainty as to which form the name *C. bulbosum* is applicable it seems unwise to adopt this earlier name.

9. Cypripedium passerinum *Richardson* in Franklin, Narrative Journey to Polar Sea, Botanical Appendix, quarto ed. 2, p. 762 (Separate p. 34) (1823).

COMMON NAME: Small White Lady's Slipper.

GEOGRAPHICAL DISTRIBUTION: Northern Ont., Hudson Bay, L. Superior, Manitoba, Sask. and Alberta to B. C. and Yukon.

FLOWERING SEASON: Late June and July.

ILLUSTRATION: Hooker, Flora Boreali-americana, pl. 206; Brown & Schäffer, Alpine Flora Canadian Rocky Mountains, opp. p. 54, pl., fig. a.

10. Cypripedium reginae *Walter*, Flora Caroliniana, p. 222 (1788).

Synonymy:

Cypripedium album *Aiton*, Hortus Kewensis, ed. 1, vol. 3, p. 303 (1789).

Cypripedium spectabile *Salisbury* in Transactions Linnean Society, vol. 1, p. 78, pl. 3, fig. 3 (1791).

Cypripedium canadensis *Michaux*, Flora Boreali-americana, vol. 2, p. 161 (1803).

Cypripedium hirsutum *Miller* according to House in Bulletin Torrey Botanical Club, vol. 32, p. 375 (1905).

Cypripedium reginae var. album *Rolfe* in Orchid Review, vol. 19, p. 208 (1911).

Calceolus reginae *Nieuwland* in American Midland Naturalist, vol. 3, p. 117 (1913).

Cypripedium hirsutum forma album *R. Hoffman* in Proceedings Boston Society Natural History, vol. 36, p. 246 (1922).

Common Name: Showy Lady's Slipper, White Petaled Lady's Slipper, Pink Lady's Slipper, Large White Lady's Slipper, Moccasin Flower.

Geographical Distribution: Nfd., N. S., N. B., P. E. I., Que. and Ont., south to Ga. and westward to Ill., Minn., Wisc. and Mo.

Flowering Season: June and July (rarely August in the north).

Illustration: Botanical Register, vol. 20, pl. 1666; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 30.

CYRTOPODIUM *R. Brown*

1. **Cyrtopodium punctatum** (*Linnaeus*) *Lindley*, Genera and Species Orchidaceous Plants, p. 188 (1833).

Synonymy:

Epidendrum punctatum *Linnaeus*, Systema Naturae, ed. 10, vol. 2, p. 1246 (1759).

Cyrtopodium Saintlegerianum *Reichenbach filius* in Gardeners' Chronicle, ser. 2, vol. 23, p. 756 (1885).

Cyrtopodium punctatum var. Saintlegerianum *Stein*, Orchideenbuch, p. 181 (1892).

COMMON NAME: Spotted-flowered Cyrtopodium.

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, Mexico, Guatemala and South America.

FLOWERING SEASON: March to May.

ILLUSTRATION: Ames, Orchidaceae, fasc. 1, pl. 15; Botanical Magazine, pl. 3507.

EPIDENDRUM *Linnaeus*

1. **Epidendrum anceps** *Jacquin*, Selectarum Stirpium Americanarum Historia, p. 224, pl. 138 (1763).

SYNONYMY: Epidendrum fuscatum *Smith*, Spicilegium Botanicum, p. 21, pl. 23 (1792).

COMMON NAME: Dingy-flowered Epidendrum, Brown Epidendrum.

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies and Central and South America.

FLOWERING SEASON: March to June (in Fla.).

ILLUSTRATION: Botanical Magazine, pl. 2844; Botanical Register, vol. 1, pl. 67 (both as *E. fuscatum*).

2. **Epidendrum Boothianum** *Lindley* in Botanical Register, vol. 24, Miscellanies, p. 5 (1838).

SYNONYMY:

Epidendrum erythronioides *Small*, Flora Southeastern United States, ed. 1, p. 328 (1903).

Epicladium Boothianum *Small*, Flora Miami, p. 56 (1913).

COMMON NAME: Epicladium.

GEOGRAPHICAL DISTRIBUTION: Fla. Also Bahama Islands and Cuba.

Flowering Season: November.

Illustration: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 9.

3. Epidendrum cochleatum *Linnaeus* var. triandrum *Ames*, Contribution to Knowledge Orchid Flora Southern Florida, p. 16, pl. 8 (1904).

Synonymy:

Epidendrum triandrum *House* in Muhlenbergia, vol. 1, p. 129 (1905).

Anacheilium cochleatum *Small*, Flora Miami, p. 57 (1913), not Hoffmannsegg.

Geographical Distribution: Florida.

Flowering Season: November to March.

Illustration: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 8.

4. Epidendrum conopseum *R. Brown*, in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 219 (1813).

Common Name: Florida Epidendrum, Tree Orchid.

Geographical Distribution: S. C., Ga., Fla., Ala. and La.

Flowering Season: July to February, May (in La.).

Illustration: Botanical Magazine, pl. 3457.

5. Epidendrum difforme *Jacquin*, Enumeratio Systematica Plantarum Caribaeis, p. 29 (1760) and Selectarum Stirpium Americanarum Historia, p. 223, pl. 136 (1763).

Synonymy:

Epidendrum umbellatum *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 121 (1788).

Auliza difformis *Small*, Flora Miami, p. 56 (1913).

Common Name: Umbelled Epidendrum.

Geographical Distribution: Fla. Also West Indies, and Central and South America.

Flowering Season: August.

Illustration: Botanical Register, vol. 1, pl. 80 (as *E. umbellatum*).

6. Epidendrum nocturnum *Jacquin*, Enumeratio Systematica Plantarum Caribaeis, p. 29 (1760) and Selectarum Stirpium Americanarum Historia, p. 225, pl. 139 (1763).

Synonymy: Auliza nocturna *Small*, Flora Miami, p. 56 (1913).

Common Name: Night-smelling Epidendrum, Slender Auliza.

Geographical Distribution: Fla. Also Bahama Islands, West Indies, Trinidad, and Central and South America. Reported from Sierra Leone.

Flowering Season: November and December.

Illustration: Botanical Magazine, pl. 3298; Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 7.

7. Epidendrum rigidum *Jacquin*, Enumeratio Systematica Plantarum Caribaeis, p. 29 (1760) and Selectarum Stirpium Americanarum Historia, p. 222, pl. 134 (1763).

Synonymy: Spathiger rigidus *Small*, Flora Miami, p. 55 (1913).

Geographical Distribution: Fla. Also Bahama Islands, West Indies, Trinidad, and Central and South America.

Flowering Season: November to January.

Illustration: Hooker's Icones Plantarum, pl. 314.

8. Epidendrum strobiliferum *Reichenbach filius* in Nederlandsch Kruidkundig Archief, vol. 4, p. 333 (1858).

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, Trinidad, and Central and South America.

FLOWERING SEASON: March.

ILLUSTRATION: Ames, Orchidaceae, fasc. 1, pl. 10.

9. Epidendrum tampense *Lindley* in Botanical Register, vol. 33, sub pl. 35 (1847).

SYNONYMY: Encyclia tampensis *Small*, Flora Miami, p. 56 (1913) (as *tampense*), and *Schlechter*, Die Orchideen, p. 211 (1914).

COMMON NAME: Tampa Encyclia.

GEOGRAPHICAL DISTRIBUTION: Fla. Also Bahama Islands and Cuba.

FLOWERING SEASON: May to August, November and December.

ILLUSTRATION: Ames, Orchidaceae, fasc. 1, pl. 8.

Goodyera

EPIPACTIS [*Haller*] *Boehmer*

1. Epipactis decipiens (*Hooker*) *Ames*, Orchidaceae, fasc. 2, p. 261 (1908).

SYNONYMY:

Spiranthes decipiens *Hooker*, Flora Boreali-americana, vol. 2, p. 203, pl. 204 (1839).

Goodyera Menziesii *Lindley*, Genera and Species Orchidaceous Plants, p. 492 (1840).

Orchiodes decipiens *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 675 (1891).

Orchiodes Menziesii *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 675 (1891).

Peramium Menziesii *Morong* in Memoirs Torrey Botanical Club, vol. 5, p. 124 (1894).

Peramium decipiens *Piper* in Contributions United States National Herbarium, vol. 11 (Flora State of Washington), p. 208 (1906).

Goodyera decipiens *Hubbard* in Standardized Plant Names, p. 328 (1923).

Common Name: Menzies' Rattlesnake Plantain.

Geographical Distribution: N. S., N. B., Que., L. Huron, Alberta and B. C.; Me., Mich., Mont., Idaho, Wash., Ore., Calif., N. Mex. and Ariz.

Flowering Season: July to September.

Illustration: Hooker, Flora Boreali-americana, pl. 204 (as *Spiranthes decipiens*).

2. Epipactis pubescens (*Willdenow*) *A. A. Eaton* in Proceedings Biological Society Washington, vol. 21, p. 65 (1908).

Synonymy:

Neottia pubescens *Willdenow*, Species Plantarum, vol. 4, p. 76 (1805).

Goodyera pubescens *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 198 (1813).

Orchiodes pubescens *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 675 (1891).

Peramium pubescens *Salisbury* according to Macmillan, Metaspermae Minnesota Valley, p. 171 (1892) and *C. C. Curtiss* ex Small & Vail in Memoirs Torrey Botanical Club, vol. 4, p. 155 (1893).

Epipactis Willdenovii *House* in Muhlenbergia, vol. 6, p. 74 (1910).

Common Name: Downy Rattlesnake Plantain.

Geographical Distribution: Que., New England, N. Y., Ky., W. Va. south to N. C. and westward to Ill., Mich., Minn. and Wisc.

Flowering Season: July to September (rarely October).

Illustration: Loddiges, Botanical Cabinet, pl. 1; Moore, Illustrations Orchidaceous Plants, Goodyera pl. 1; Ames in Rhodora, vol. 24, pl. 135 (all as *Goodyera pubescens*).

3. Epipactis repens (*Linnaeus*) *Crantz*, Stirpium Austriacarum, ed. 2, vol. 2, fasc. 6, p. 473 (1769).

Synonymy:

Satyrium repens *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 945 (1753).

Peramium repens *Salisbury* in Transactions Horticultural Society, vol. 1, ed. 1, p. 301 (1812).

Goodyera repens *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 198 (1813).

Orchiodes repens *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 674 (1891).

Common Name: Lesser Rattlesnake Plantain, Creeping Goodyera.

Geographical Distribution: Extreme north, Rocky Mountains and B. C. The common form in Europe.

Flowering Season: July and August.

Illustration: Reichenbach filius, Icones Germanicae et Helveticae, vol. 13 & 14, pl. 130 (482) (as *Goodyera repens*).

Var. ophioides (*Fernald*) *A. A. Eaton* in Proceedings Biological Society Washington, vol. 21, p. 65 (1908).

Synonymy:

Goodyera repens var. ophioides *Fernald* in Rhodora, vol. 1, p. 6 (1899).

Peramium repens var. ophioides *Heller*, Catalogue North American Plants, ed. 2, p. 4 (1900).

Peramium ophioides *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 302 (1901).

Geographical Distribution: Nfd., N. S., Que., Ont. and Alberta; Me., N. H., Vt., Mass., Conn., N. Y., Va. and N. C.; Wisc., Mich. and Minn. Also Europe and Asia.

Flowering Season: July and August (rarely September).

Illustration: Schkuhr, Botanisches Handbuch, pl. 272 (as *Satyrium repens*).

4. **Epipactis tesselata** (*Loddiges*) *A. A. Eaton* in Proceedings Biological Society Washington, vol. 21, p. 66 (1908).

SYNONYMY:

Goodyera tesselata *Loddiges*, Botanical Cabinet, vol. 10, pl. 952 (1824).

Orchiodes tessellatum *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 675 (1891).

Peramium tesselatum *Heller*, Catalogue North American Plants, ed. 2, p. 4 (1900).

COMMON NAME: Loddiges's Rattlesnake Plantain.

GEOGRAPHICAL DISTRIBUTION: Nfd., N. S., N. B., Que. and Ont.; Me., N. H., Vt., Mass., Conn., N. Y. and Mich.

FLOWERING SEASON: July, August and early September.

ILLUSTRATION: Botanical Magazine, pl. 2540 (as *Goodyera pubescens β. minor*); House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 41B (as *Peramium tesselatum*).

ERYTHRODES *Blume*

1. **Erythrodes querceticola** (*Lindley*) *Ames*, Orchidaceae, fasc. 5, p. 29, in footnote (1915).

SYNONYMY:

Physurus querceticola *Lindley*, Genera and Species Orchidaceous Plants, p. 505 (1840).

Physurus Sagraeanus *A. Richard* in Sagra, Historia Isla Cuba, Segunda parte: Historia natural, vol. 11 (Flora Cubana Fanerogamia, vol. 2), p. 253, pl. 88 (1850).

Goodyera quercicola *Chapman*, Flora Southern United States, ed. 1, p. 463 (1860).

COMMON NAME: Low Erythrodes.

GEOGRAPHICAL DISTRIBUTION: Fla., La., and Tex. (one record). Also Bahama Islands, Cuba and Guadeloupe.

Flowering Season: November to March (in Fla.).

Illustration: A. Richard in Sagra, Historia Isla Cuba, Segunda parte: Historia natural, vol. 11 (Flora Cubana Fanerogamia, vol. 2), pl. 88 (as *Physurus Sagraeanus*).

EULOPHIA *R. Brown*

1. Eulophia alta (*Linnaeus*) *Fawcett & Rendle*, Flora Jamaica, vol. 1, p. 112, pl. 22, figs. 4–8 (1910).

Synonymy:

Limodorum altum *Linnaeus*, Systema Naturae, ed. 12, vol. 2, p. 594 (1767).

Cyrtopodium Woodfordii *Sims* in Botanical Magazine, pl. 1814 (April 1816).

Dendrobium longifolium *Humboldt, Bonpland & Kunth*, Nova Genera et Species, vol. 1, p. 360 (August 1816).

Cyrtopera Woodfordii *Lindley*, Genera and Species Orchidaceous Plants, p. 189 (1833).

Cyrtopera longifolia *Reichenbach filius* in Walpers Annales Botanices Systematicae, vol. 6, p. 668 (1863).

Eulophia Woodfordii *Rolfe* in Thistleton-Dyer, Flora Tropical Africa, vol. 7, p. 68 (1897).

Platypus papilliferus *Small & Nash* in Small, Flora Southeastern United States, ed. 1, p. 329 (1903).

Platypus altus *Small*, Flora Southeastern United States, ed. 2, p. 329 (1913).

Eulophia longifolia *Schlechter*, Die Orchideen, p. 347 (1914).

Common Name: Woodford's Cyrtopodium, Wild Coco, Ground Coco.

Geographical Distribution: Fla. Also West Indies, Trinidad, Central and South America, and Africa (perhaps introduced).

Flowering Season: October to December.

Illustration: Botanical Register, vol. 18, pl. 1508 (as *Cyrtopodium Woodfordii*).

2. Eulophia ecristata (*Fernald*) *Ames*, Contribution to Knowledge Orchid Flora Southern Florida, p. 19 (1904).

Synonymy:

Bletia verecunda *Chapman*, Flora Southern United States, ed. 1, p. 456 (1860), in part, not R. Brown.

Cyrtopodium Woodfordii *Chapman*, Flora Southern United States, ed. 3, p. 482 (1897), not Sims.

Cyrtopodium ecristatum *Fernald*, in Botanical Gazette, vol. 24, p. 433 (1897).

Triorchos ecristatus *Small*, Flora Southeastern United States, ed. 1, p. 329 (1903).

Pteroglossaspis ecristata *Rolfe* in Orchid Review, vol. 12, p. 136 (1904).

Geographical Distribution: Fla. Also Cuba.

Flowering Season: June to September.

HABENARIA *Willdenow*

χ Habenaria Andrewsii *White* ex Niles, Bog-trotting for Orchids, p. 258, pl. (1904).

Synonymy: Habenaria psychodes χ lacera *Andrews* in Rhodora, vol. 2, p. 114 (1900), by inference only; vol. 3, p. 246 (1901).

Common Name: Andrews' Rose-purple Orchis.

Geographical Distribution: Nfd. (*Fernald*), N. S.; Me., Mass. (*Hoffmann*) and Vt.

Flowering Season: July and early August.

Illustration: Ames, Orchidaceae, fasc. 4, pl. 66, fig. 2.

1. Habenaria behringiana (*Rydberg*) *Ames*, Orchidaceae, fasc. 4, p. 91, pl. 60 (1910).

Synonymy: Limnorchis behringiana *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 620 (1901).

Geographical Distribution: Attu Island? (The specimens in the Herbarium of the Geological Survey Department, Canada, are not uniform. On the upper half of the sheet are three plants of *H. behringiana* which, in a note, J. Macoun has attributed to Grebnitzky, who collected them on Behring Island (Asia). On the lower half of the sheet are two specimens of *H. viridis* var. *bracteata*. The label which originally accompanied these five specimens indicates that they were found in boggy spots, Attu Island, by J. M. Macoun in August 1891. As Macoun's note refers directly to the specimens of *H. behringiana* it is impossible to state definitively that they came from North America. Presumably the specimens of *H. viridis* var. *bracteata* were collected on Attu Island.)

Flowering Season: August.

Illustration: Ames, Orchidaceae, fasc. 4, pl. 60.

2. Habenaria blephariglottis (*Willdenow*) *Hooker*, Exotic Flora, vol. 2, pl. 87 (1824).

Synonymy:

Orchis blephariglottis *Willdenow*, Species Plantarum, vol. 4, p. 9 (1805).

Platanthera blephariglottis *Lindley*, Genera and Species Orchidaceous Plants, p. 291 (1835).

Platanthera holopetala *Lindley*, Genera and Species Orchidaceous Plants, p. 291 (1835).

Blephariglottis albiflora *Rafinesque*, Flora Telluriana, vol. 2, p. 38 (1837).

Platanthera blephariglottis var. holopetala *Torrey*, Flora State of New York, vol. 2, p. 277 (1843).

Platanthera ciliaris var. blephariglottis *Chapman*, Flora Southern United States, ed. 1, p. 460 (1860).

Habenaria blephariglottis var. holopetala *A. Gray*, Manual Botany Northern United States, ed. 5, p. 502 (1867).

Habenaria ciliaris var. alba *Morong* in Bulletin Torrey Botanical Club, vol. 20, p. 38 (1893).

Habenaria ciliaris var. holopetala *Morong* in Bulletin Torrey Botanical Club, vol. 20, p. 38 (1893).

Blephariglottis blephariglottis *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (1901).

Blephariglottis blephariglottis var. holopetala *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (1901).

Habenaria holopetala *Niles*, Bog-trotting for Orchids, p. 256 (1904).

Blephariglottis alba *House* in Muhlenbergia, vol. 1, p. 127 (1906).

COMMON NAME: White Fringed Orchis.

GEOGRAPHICAL DISTRIBUTION: Nfd. south to N. C. and westward to Ont., Mich. and O., also Miss.

FLOWERING SEASON: July and August.

ILLUSTRATION: Hooker, Exotic Flora, vol. 2, pl. 87; Loddiges, Botanical Cabinet, vol. 10, pl. 925; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 38 (as *Blephariglottis blephariglottis*).

Var. conspicua (*Nash*) *Ames* in Rhodora, vol. 10, p. 70 (1908).

SYNONYMY:

Habenaria conspicua *Nash* in Bulletin Torrey Botanical Club, vol. 23, p. 100 (1896).

Blephariglottis conspicua *Small*, Flora Southeastern United States, ed. 1, p. 313 (1903).

GEOGRAPHICAL DISTRIBUTION: N. C. to Fla. and west to Miss. and Tenn.

FLOWERING SEASON: August and September.

3. Habenaria brevifolia *Greene* in Botanical Gazette, vol. 6, p. 218 (1881).

SYNONYMY:

Platanthera brevifolia *Kränzlin*, Orchidacearum Genera et Species, vol. 1, p. 639 (1899).

Limnorchis brevifolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 631 (1901).

Geographical Distribution: N. Mex. Also Mexico.

Flowering Season: August and September.

Illustration: Ames, Orchidaceae, fasc. 4, pl. 63.

χ Habenaria Canbyi *Ames* in Rhodora, vol. 10, p. 70 (1908) (*H. blephariglottis* χ *cristata*).

Synonymy: Blephariglottis Canbyi *W. Stone*, Plants Southern New Jersey, p. 368 (1912).

Geographical Distribution: N. J. and Del. (Sussex Co.).

Flowering Season: July.

χ Habenaria Chapmanii (*Small*) *Ames*, Orchidaceae, fasc. 4, p. 155 (1910) (*H. ciliaris* χ *cristata*).

Synonymy: Blephariglottis Chapmanii *Small*, Flora Southeastern United States, ed. 1, p. 314 (1903).

Geographical Distribution: Florida.

Flowering Season: August.

4. Habenaria Chorisiana *Chamisso* in Linnaea, vol. 3, p. 31 (1828).

Synonymy:

Peristylus Chorisianus *Lindley*, Genera and Species Orchidaceous Plants, p. 297 (1835).

Platanthera Chorisiana *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 128, pl. 83 (435), figs. II–IV, 4–6 (1851).

Geographical Distribution: Unalaska. Also Japan.

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 83 (435), figs. II–IV, 4–6 (as *Platanthera Chorisiana*).

5. Habenaria ciliaris (*Linnaeus*) *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 194 (1813).

SYNONYMY:

Orchis ciliaris *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 939 (1753), exclude Gronovius Flora Virginica citation.

Platanthera ciliaris *Lindley*, Genera and Species Orchidaceous Plants, p. 292 (1835).

Blephariglottis flaviflora *Rafinesque*, Flora Telluriana, vol. 2, p. 39 (1837).

Blephariglottis ciliaris *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (1901).

COMMON NAME: Yellow Fringed Orchis, Rattlesnake's Master.

GEOGRAPHICAL DISTRIBUTION: Ont., Vt. and Mass. south to Tenn., Fla., Miss. and westward to Mich., Ill. and Mo.; also La. and Tex.

FLOWERING SEASON: July and August (rarely September).

ILLUSTRATION: Botanical Magazine, pl. 1668; Loddiges, Botanical Cabinet, vol. 14, pl. 1326; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 37B (as *Blephariglottis ciliaris*).

6. Habenaria clavellata (*Michaux*) *Sprengel*, Systema Vegetabilium, vol. 3, p. 689 (1826).

SYNONYMY:

Orchis clavellata *Michaux*, Flora Boreali-americana, vol. 2, p. 155 (1803), exclude synonymy in part.

Orchis tridentata *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 41 (1805).

Orchis clavellata β. tridentata *Muhlenberg*, Catalogus Plantarum Americae Septentrionalis, p. 80 (1813), *nomen*.

Habenaria tridentata *Hooker*, Exotic Flora, vol. 2, pl. 81 (1824).

Gymnadenia tridentata *Lindley*, Genera and Species Orchidaceous Plants, p. 277 (1835).

Gymnadenia tridentata β. clavellata *Wood*, Class-book of Botany, p. 683 (1861).

Peristylus clavellatus *Kränzlin*, Orchidacearum Genera et Species, vol. 1, p. 521 (1898).

Gymnadeniopsis clavellata *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 293 (1901).

Common Name: Small Green Wood Orchis.

Geographical Distribution: Nfd., Anticosti, Que., N. S., P. E. I., N. B. and Ont.; New England, N. Y. south to Fla. and westward to Minn., Ia., Ark. and La.

Flowering Season: July and August.

Illustration: Hooker, Exotic Flora, vol. 2, pl. 81 (as *H. tridentata*).

7. Habenaria cristata (*Michaux*) *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 194 (1813).

Synonymy:

Orchis cristata *Michaux*, Flora Boreali-americana, vol. 2, p. 156 (1803).

Platanthera cristata *Lindley*, Genera and Species Orchidaceous Plants, p. 291 (1835).

Blephariglottis cristata *Rafinesque*, Flora Telluriana, vol. 2, p. 39 (1837).

Common Name: Crested Fringed Orchis, Crested Rein Orchis.

Geographical Distribution: Mass., N. J., Pa., south to Fla., westward along the Gulf coast to La., also Tenn. and Ark.

Flowering Season: July and August.

Illustration: Loddiges, Botanical Cabinet, vol. 17, pl. 1661.

8. Habenaria dilatata (*Pursh*) *Hooker*, Exotic Flora, vol. 2, pl. 95 (1824).

Synonymy:

Orchis dilatata *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 588 (1814).

Habenaria borealis *Chamisso* in Linnaea, vol. 3, p. 28 (1828).

Habenaria borealis var. albiflora *Chamisso* in Linnaea, vol. 3, p. 28 (1828).

Platanthera dilatata *Lindley* ex Beck, Botany Northern and Middle States, ed. 1, p. 347 (1833).

Platanthera graminea *Lindley*, Genera and Species Orchidaceous Plants, p. 289 (1835).

Orchis hyperborea var. dilatata *Oakes* in Thompson, History of Vermont, pt. 1, p. 199 (1842).

Platanthera borealis *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 125, pl. 79 (431), figs. I, 1 & 2 (1851).

Platanthera convallariaefolia *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 127, in part?, pl. 79 (431), figs. II, 3 & 4 (1851), not Lindley.

Platanthera hyperborea var. dilatata *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 126, pl. 81 (433), figs. I, 1–3, 5–7 (1851).

Platanthera hyperborea var. graminea *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 126, pl. 81 (433), figs. II, 4 & 8 (1851).

Habenaria dilatatiformis *Rydberg* in Bulletin Torrey Botanical Club, vol. 24, p. 189 (1897), exclude synonymy.

Platanthera hyperborea var. convallariaefolia *Kränzlin*, Orchidacearum Genera et Species, vol. 1, p. 642 (1899), exclude synonymy.

Limnorchis dilatatiformis *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 105 (1900).

Limnorchis dilatata *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 294 (1901).

Limnorchis fragrans *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 294 (1901).

Limnorchis borealis *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 621 (1901).

Limnorchis foliosa *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 622 (1901).

Limnorchis dilatata var. linearifolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 623 (1901).

Limnorchis gracilis *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 627 (1901), in part, according to specimens cited.

Limnorchis graminifolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 627 (1901), according to specimens cited.

Limnorchis convallariaefolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 628 (1901), as to Unalaska specimens.

Limnorchis leptoceratitis *Rydberg* in Bulletin New York Botanical Garden, vol. 2, p. 162 (1901), exclude *Rudkin* specimen.

Habenaria fragrans *Niles*, Bog-trotting for Orchids, p. 253 (1904).

Habenaria graminifolia *Henry*, Flora Southern British Columbia, p. 92 (1915).

Common Name: Tall White Bog Orchis, Tall White Northern Orchis, Fragrant Orchis, Boreal Bog Orchid.

Geographical Distribution: Subarctic America; Nfd., Lab., Ungava, Anticosti, N. S., N. B., P. E. I., Que., Ont. and west to B. C. and Alaska, Unalaska; Me. south to N. J., Mich., Minn., S. Dak., Mont. and Idaho south to Colo., Utah and N. Mex.; Wash., Ore. and Calif.

Flowering Season: July and August (rarely June and September).

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 81 (433), figs. I, 1–3, 5–7 (as *Platanthera hyperborea* var. *dilatata*); also pl. 79 (431), figs. I, 1 & 2 (as *Platanthera borealis*).

Var. leucostachys (*Lindley*) *Ames*, Orchidaceae, fasc. 4, p. 71 (1910).

Synonymy:

Platanthera leucostachys *Lindley*, Genera and Species Orchidaceous Plants, p. 288 (1835).

Habenaria pedicellata *S. Watson* in Proceedings American Academy, vol. 12, p. 276 (1877).

Habenaria leucostachys *S. Watson* in Brewer & Watson, Botany of California, vol. 2, p. 134 (1880), exclude synonym *H. Thurberi*.

Habenaria flagellans *S. Watson* in Brewer & Watson, Botany of California, vol. 2, p. 483 (1880).

Platanthera hyperborea var. leucostachys *Kränzlin*, Orchidacearum Genera et Species, vol. 1, p. 642 (1899), exclude all synonymy but Lindley.

Limnorchis leucostachys *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 106 (1900).

Limnorchis Thurberi *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 624 (1901), as to California specimens cited.

Limnorchis leucostachys var. robusta *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 626 (1901).

Limnorchis leptoceratitis *Rydberg* in Bulletin New York Botanical Garden, vol. 2, p. 162 (1901), as to *Rudkin* specimen.

Habenaria leptoceratitis *Henry*, Flora Southern British Columbia, p. 92 (1915).

Habenaria leucostachys var. virida *Jepson*, Flora California, vol. 1, pt. 6, p. 331 (1921).

Common Name: White-flowered Bog Orchid, Sierra Rein Orchis.

Geographical Distribution: B. C., Wash. and Idaho south to Nev., Utah, Calif. and Ariz., also Alaska.

Flowering Season: June to August.

Illustration: Abrams, Illustrated Flora Pacific States, vol. 1, p. 474, fig. 1158 (as *Limnorchis leucostachys*).

Var. media (*Rydberg*) *Ames* in Rhodora, vol. 10, p. 70 (1908).

Synonymy:

Limnorchis media *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 294 (1901), in part.

Habenaria media *Niles*, Bog-trotting for Orchids, p. 252 (1904).

Common Name: Intermediate Bog Orchis.

Geographical Distribution: Que., Me. and Vt. Reported from N. Y., Wisc., Minn. and S. Dak. by Rydberg.

Flowering Season: June and July.

Illustration: Rydberg in Bulletin Torrey Botanical Club, vol. 28, p. 618, fig. 6 (as *Limnorchis media*).

9. Habenaria distans *Grisebach*, Catalogus Plantarum Cubensium, p. 270 (1866).

Geographical Distribution: Fla. (Lee Co., Caloosa, *A. P. Garber* in 1878). Also Cuba, Porto Rico and Haiti.

Flowering Season: August (in Fla.).

10. Habenaria elegans (*Lindley*) *Bolander*, Catalogue of Plants in Vicinity of San Francisco, p. 29 (1870), *nomen;* ex S. Watson in Brewer & Watson, Botany of California, vol. 2, p. 133 (1880) and *Jepson*, Flora of California, vol. 1, pt. 6, p. 330 (1921).

Synonymy:

Platanthera elegans *Lindley*, Genera and Species Orchidaceous Plants, p. 285 (1835).

Gymnadenia longispica *Durand* in Journal Academy Natural Sciences Philadelphia, ser. 2, vol. 3, p. 101 (1855).

Habenaria Michaelii *Greene* in Bulletin California Academy Science, vol. 1, p. 281 (1885).

Montolivaea elegans *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 106 (1900), not Reichenbach filius.

Piperia elegans *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, pp. 270, 638 (1901).

Piperia elongata *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 270 (1901).

Piperia lancifolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 637 (1901).

Piperia leptopetala *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 637 (1901).

Piperia multiflora *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 638 (1901).

Piperia longispica *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 639 (1901).

Piperia Michaelii *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 640 (1901).

Habenaria multiflora *Blankenship* in Montana College of Agriculture and Mechanic Arts, Science Studies, Botany, vol. 1, p. 45 (1905).

Habenaria longispicata *S. B. Parish* in Plant World, vol. 20, p. 209 (1917).

Habenaria elegans var. elata *Jepson*, Flora of California, vol. 1, pt. 6, p. 330 (1921).

COMMON NAME: Narrow-petaled Piperia, Many-flowered Piperia, Elegant Piperia, Long-spiked Piperia, Purple-flowered Piperia.

GEOGRAPHICAL DISTRIBUTION: B. C., Mont., Idaho, Wash., Ore. and Calif.

FLOWERING SEASON: June to August.

ILLUSTRATION: Ames, Orchidaceae, fasc. 4, pl. 64.

Var. maritima (*Greene*) *Ames*, Orchidaceae, fasc. 4, p. 113 (1910).

SYNONYMY:

Habenaria maritima *Greene* in Pittonia, vol. 2, p. 298 (1892).

Piperia maritima *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 641 (1901).

COMMON NAME: Coast Piperia.

GEOGRAPHICAL DISTRIBUTION: Coast of Calif. from San Francisco to Monterey Co.

FLOWERING SEASON: August to October.

ILLUSTRATION: Abrams, Illustrated Flora Pacific States, vol. 1, p. 477, fig. 1166 (as *Piperia maritima*).

11. Habenaria fimbriata (*Dryander*) *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 193 (1813).

Synonymy:

Orchis fimbriata *Dryander* in Aiton, Hortus Kewensis, ed. 1, vol. 3, p. 297 (1789).

Orchis grandiflora *Bigelow*, Florula Bostoniensis, ed. 2, p. 321 (1824).

Habenaria grandiflora *Torrey*, Compendium Flora Northern and Middle States, p. 319 (1826).

Platanthera fimbriata *Lindley*, Genera and Species Orchidaceous Plants, p. 293 (1835), exclude synonymy in part.

Platanthera grandiflora *Lindley*, Genera and Species Orchidaceous Plants, p. 294 (1835).

Platanthera fimbriata α. grandiflora *Hooker*, Flora Boreali-americana, vol. 2, p. 200 (1839).

Habenaria psycodes var. grandiflora *A. Gray* in American Journal of Science, vol. 38, p. 310 (1840).

Platanthera psycodes var. grandiflora *Torrey*, Flora State of New York, vol. 2, p. 278 (1843).

Platanthera incisa *Lindley* in Paxton, Flower Garden, vol. 2, p. 24, fig. 145 (1851).

Platanthera Bigelovii *Wood*, Class-book of Botany, p. 685 (1861), exclude synonymy.

Blephariglottis grandiflora *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (1901).

Blephariglottis psycodes var. grandiflora *Schaffner*, Catalogue Ohio Vascular Plants (in Ohio State University Bulletin, vol. 18), p. 161 (1914).

Common Name: Large Purple Fringed Orchis, Purple Fringed Habenaria.

Geographical Distribution: Nfd., N. S., N. B., Que.; New England and N. Y. south to N. J., Pa., W. Va., N. C. and Tenn.

Flowering Season: Mid-June to August.

Illustration: Botanical Register, vol. 5, pl. 405.

Forma albiflora *Rand & Redfield*, Flora Mount Desert Island, p. 153 (1894).

Geographical Distribution: Me. (Mt. Desert).

12. **Habenaria flava** (*Linnaeus*) *R. Brown* ex Sprengel, Systema Vegetabilium, vol. 3, p. 691 (1826).

Synonymy:

Orchis flava *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 942 (1753).

Orchis virescens *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 37 (1805).

Satyrium virescens *Persoon*, Synopsis Plantarum, vol. 2, p. 507 (1807).

Habenaria herbiola *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 193 (1813).

Orchis flava var. virescens *Green* in Transactions Society for Promotion of Useful Arts, vol. 3, p. 120 (1814) (Catalogue of Plants Indigenous to State of New York, p. 60), *nomen*.

Orchis fuscescens *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 587 (1814), not Linnaeus nor Gmelin.

Orchis herbiola *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 743 — supplement — (1814).

Orchis bidentata *Elliot*, Sketch Botany South Carolina and Georgia, vol. 2, p. 488 (1824).

Habenaria virescens *Sprengel*, Systema Vegetabilium, vol. 3, p. 688 (1826).

Habenaria fuscescens *Torrey*, Compendium Flora Northern and Middle States, p. 318 (1826).

Orchis scutellata *Nuttall* in Transactions American Philosophical Society, new ser., vol. 5, p. 161 (1834).

Platanthera herbiola *Lindley*, Genera and Species Orchidaceous Plants, p. 287 (1835).

Platanthera flava *Lindley*, Genera and Species Orchidaceous Plants, p. 293 (1835).

Peristylus virescens *Lindley*, Genera and Species Orchidaceous Plants, p. 298 (1835).

Perularia virescens *A. Gray* in Botanical Gazette, vol. 5, p. 63 (1880).

Platanthera fuscescens *Kränzlin*, Orchidacearum Genera et Species, vol. 1, p. 637 (1899).

Perularia flava *Farwell* in Eleventh Annual Report Commissioners Parks and Boulevards Detroit, p. 54 (1900).

Perularia bidentata *Small*, Flora Southeastern United States, ed. 2, p. 314 (1913).

Perularia scutellata *Small*, Flora Southeastern United States, ed. 2, p. 314 (1913).

Habenaria flava var. virescens *Fernald* in Rhodora, vol. 23, p. 148 (1921), in footnote.

COMMON NAME: Tubercled Orchis.

GEOGRAPHICAL DISTRIBUTION: N. S., N. B., Que., Ont.; New England and N. Y. south to Fla. and along the Gulf coast to Tex.; Tenn. and W. Va.; westward to Minn., Ill. and Mo.

FLOWERING SEASON: June and July. Less commonly May, August and September.

ILLUSTRATION: Loddiges, Botanical Cabinet, pl. 1748 (as *Orchis fuscescens*); Mathews, Field Book American Wild Flowers, p. 84, pl. (as *H. virescens*).

13. Habenaria Hookeri *Torrey* ex A. Gray in Annals Lyceum Natural History New York, vol. 3 (first impression), p. 228 (1835).

SYNONYMY:

Habenaria orbiculata *Goldie* in Edinburgh Philosophical Journal, vol. 6, p. 331, in text (Separate, p. 13) (1822), not (Pursh) Torrey.

Platanthera Hookeri *Lindley*, Genera and Species Orchidaceous Plants, p. 286 (1835).

Habenaria Hookeriana *Torrey* ex A. Gray in Annals Lyceum Natural History New York, vol. 3 (regular issue), p. 229 (1836).

Platanthera Hookeri var. oblongifolia *Paine*, Catalogue of Plants Oneida County, p. 83 (1865).

Habenaria Hookeri var. oblongifolia *A. Gray*, Manual Botany Northern United States, ed. 5, p. 501 (1867).

Orchis Hookeri *Wood*, American Botanist and Florist, p. 327 (1870).

Lysias Hookeriana *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 295 (1901).

Habenaria oblongifolia *Niles*, Bog-trotting for Orchids, p. 250 (1904).

Common Name: Hooker's Orchis.

Geographical Distribution: N. S., N. B., Que., Ont.; Me., N. H., Vt., Mass., Conn., N. Y., Pa., O., Mich., Wisc., Minn. and Ia.

Flowering Season: Late May to July.

Illustration: Mathews, Field Book American Wild Flowers, p. 86, pl. (as *H. Hookeriana*); Hooker, Exotic Flora, vol. 2, pl. 145 (as *H. orbiculata*); House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 36 (as *Lysias Hookeriana*).

14. Habenaria hyperborea (*Linnaeus*) *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 193 (1813).

Synonymy:

Orchis hyperborea *Linnaeus*, Mantissa Plantarum, p. 121 (1767).

Orchis huronensis *Nuttall*, Genera North American Plants, vol. 2, p. 189 (1818).

Habenaria huronensis *Sprengel*, Systema Vegetabilium, vol. 3, p. 688 (1826).

Habenaria borealis var. viridiflora *Chamisso* in Linnaea, vol. 3, p. 28 (1828).

Gymnadenia hyperborea *Link*, Handbuch, vol. 1, p. 242 (1829).

Platanthera hyperborea *Lindley*, Genera and Species Orchidaceous Plants, p. 287 (1835).

Platanthera huronensis *Lindley*, Genera and Species Orchidaceous Plants, p. 288 (1835).

Orchis hyperborea β. huronensis *Wood*, Class-book of Botany, ed. 29, p. 533 (1853).

Limnorchis hyperborea *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 104 (1900).

Limnorchis media *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 294 (1901), in part.

Limnorchis huronensis *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 294 (1901).

Limnorchis brachypetala *Rydberg* in Bulletin New York Botanical Garden, vol. 2, p. 161 (1901).

Limnorchis viridiflora *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 616 (1901).

Limnorchis major *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 617 (1901).

Habenaria hyperborea var. huronensis *Farwell* in Papers Michigan Academy Science, vol. 1, p. 92 (1923).

Habenaria hyperborea var. media *Farwell* in Papers Michigan Academy Science, vol. 1, p. 92 (1923).

Common Name: Tall Northern Green Orchis, Tall Leafy Green Orchis, Green-flowered Bog Orchid.

Geographical Distribution: Nfd., Lab., Anticosti, N. S., N. B., P. E. I., Que., Ont., to B. C. and Alaska; New England, N. Y., Pa.; Ind., Ill., Mich., Wis., S. Dak., Neb., Mont., Idaho, Wyo., Colo., Utah and Ore. Also Greenland and Iceland.

Flowering Season: June to August.

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 80 (432) (as *Platanthera dolichorhiza* and *P. hyperborea* 1. *genuina*); House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 37A (as *Limnorchis hyperborea*).

Var. purpurascens (*Rydberg*) *Ames*, Orchidaceae, fasc. 4, p. 90 (1910).

Synonymy: Limnorchis purpurascens *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, pp. 269, 615 (1901).

Geographical Distribution: Colo. and N. Mex.

Flowering Season: Late June to mid-August.

ILLUSTRATION: Rydberg in Bulletin Torrey Botanical Club, vol. 28, p. 615, fig. 2 (as *Limnorchis purpurascens*).

15. **Habenaria integra** (*Nuttall*) *Sprengel*, Systema Vegetabilium, vol. 3, p. 689 (1826).

SYNONYMY:

Orchis integra *Nuttall*, Genera North American Plants, vol. 2, p. 188 (1818).

Platanthera integra *Gray* ex Beck, Botany United States North of Virginia, ed. 2, p. 348 (1848).

Gymnadeniopsis integra *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 293 (1901).

COMMON NAME: Small Southern Yellow Orchis.

GEOGRAPHICAL DISTRIBUTION: N. J., N. C. to Fla., along the Gulf coast to Tex., also Tenn.

FLOWERING SEASON: July to September.

ILLUSTRATION: Britton & Brown, Illustrated Flora Northern United States, Canada, etc., ed. 1, vol. 1, fig. 1102; Gibson, Our Native Orchids, pl. 16, fig. 2.

16. **Habenaria lacera** (*Michaux*) *Loddiges*, Botanical Cabinet, vol. 3, pl. 229 (1818).

SYNONYMY:

Orchis lacera *Michaux*, Flora Boreali-americana, vol. 2, p. 156 (1803).

Platanthera psychodes *Lindley*, Genera and Species Orchidaceous Plants, p. 294 (1835), exclude synonym *Orchis psycodes*.

Platanthera lacera *D. Don* in Sweet, Hortus Britannicus, ed. 3, p. 650 (1839).

Habenaria lacera var. elongata *Peck* in 46th Report New York State Museum, p. 129 (Separate, p. 49) (1893).

Fimbriella lacera *Farwell* in Eleventh Annual Report Commissioners Parks and Boulevards Detroit, p. 55 (1900).

Blephariglottis lacera *Farwell* in Second Report Michigan Academy Science, p. 42 (October 10, 1901) and *Rydberg*

in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (October 24, 1901).

COMMON NAME: Ragged Fringed Orchis, Ragged Orchis, Green-fringed Orchis.

GEOGRAPHICAL DISTRIBUTION: Nfd., N. S., P. E. I., N. B., Que., Ont. and Manitoba; New England and N. Y. south to N. C., W. Va. and Ala., westward to Ill., Mich., Wisc. and Mo.

FLOWERING SEASON: June (rarely), July and August (in the north), June, rarely May (in the south).

ILLUSTRATION: Loddiges, Botanical Cabinet, vol. 3, pl. 229; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 39B (as *Blephariglottis lacera*).

17. Habenaria leucophaea (*Nuttall*) *A. Gray*, Manual Botany Northern United States, ed. 5, p. 502 (1867).

SYNONYMY:

Orchis leucophaea *Nuttall* in Transactions American Philosophical Society, new ser., vol. 5, p. 161 (1834).

Platanthera leucophaea *Lindley*, Genera and Species Orchidaceous Plants, p. 294 (1835).

Fimbriella leucophaea *Farwell* in Eleventh Annual Report Commissioners Parks and Boulevards Detroit, p. 55 (1900).

Blephariglottis leucophaea *Farwell* in Second Report Michigan Academy Science, p. 42 (October 10, 1901) and *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (October 24, 1901).

COMMON NAME: Prairie White Fringed Orchis.

GEOGRAPHICAL DISTRIBUTION: N. S., Ont., Me. (Aroostook Co., Crystal), N. Y., O., Ill., Mo., Ia., Mich., Minn., Wisc. and southward to La., Neb., and Kans. and Ark.

FLOWERING SEASON: June and July (in southerly and westerly portions of its range), July and August (in the northeast).

ILLUSTRATION: Gibson, Our Native Orchids, pl. 25, fig. 2.

18. Habenaria limosa (*Lindley*) *Hemsley* in Godman & Salvin, Biologia Centrali-americana, Botany, vol. 3, p. 305 (1884).

Synonymy:

Platanthera limosa *Lindley* in Annals and Magazine Natural History, vol. 4, p. 381 (1840).

Habenaria Thurberi *A. Gray* in Proceedings American Academy, vol. 7, p. 389 (1868).

Limnorchis arizonica *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 629 (1901).

Geographical Distribution: N. Mex. and Ariz. Also Mexico.

Flowering Season: July, rarely August (in the U. S.).

19. Habenaria macroceratitis *Willdenow*, Species Plantarum, vol. 4, p. 44 (1805).

Synonymy:

Orchis Habenaria *Linnaeus*, Systema Naturae, ed. 10, vol. 2, p. 1242 (1759) and *Elmgren*, Plantarum Jamaicensium Pugillus, p. 25 (1759) (in Linnaeus, Amoenitates Academicae, vol. 5, p. 408 (1760)).

Nemuranthes Habenaria *Rafinesque*, Flora Telluriana, vol. 2, p. 62 (1837).

Habenaria Habenaria *Small*, Flora Southeastern United States, ed. 1, p. 316 (1903).

Common Name: Long-horned Habenaria.

Geographical Distribution: Fla. Also Cuba, Jamaica, Mexico, and Central and South America.

Flowering Season: August and September (in Fla.).

Illustration: Botanical Magazine, pl. 2947 (as *H. macroceras*).

20. Habenaria macrophylla *Goldie* in Edinburgh Philosophical Journal, vol. 6, p. 331 (Separate, p. 13) (1822).

Synonymy:

Lysias orbiculata *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 294 (1901), in part.

Lysias macrophylla *House* in Muhlenbergia, vol. 1, p. 127 (1906).

Geographical Distribution: Nfd., N. S., N. B., Que., Ont.; Me., N. H., Vt., Mass., Conn., N. Y. and Mich.

Flowering Season: Late June to August.

Illustration: Ames in Rhodora, vol. 8, p. 2, fig.

21. Habenaria nivea (*Nuttall*) *Sprengel*, Systema Vegetabilium, vol. 3, p. 689 (1826).

Synonymy:

Orchis nivea *Nuttall*, Genera North American Plants, vol. 2, p. 188 (1818).

Gymnadenia conica *Lindley*, Genera and Species Orchidaceous Plants, p. 280 (1835).

Gymnadenia nivea *Lindley*, Genera and Species Orchidaceous Plants, p. 280 (1835).

Peristylus niveus *Kränzlin*, Orchidacearum Genera et Species, vol. 1, p. 520 (1898).

Gymnadeniopsis nivea *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 293 (1901).

Common Name: Southern Small White Orchis.

Geographical Distribution: N. J., Del., N. C. south to Fla. and along the Gulf coast to Tex., also Ark.

Flowering Season: May and June (in the south), late August (in N. J. and Del.).

Illustration: Gibson, Our Native Orchids, pl. 16, figs. 1 & 3.

22. Habenaria obtusata (*Pursh*) *Richardson* in Franklin, Narrative Journey to Polar Sea, Botanical Appendix, quarto ed. 1, p. 750 (Separate, p. 22) (1823).

Synonymy:

Orchis obtusata *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 588 (1814).

Platanthera obtusata *Lindley*, Genera and Species Orchidaceous Plants, p. 284 (1835).

Lysiella obtusata *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 104 (1900).

Common Name: Small Northern Bog Orchis.

Geographical Distribution: Throughout Canada to Alaska; Me., N. H., Vt., Mass., N. Y., Mich., Wisc., Minn., Mont., Wyo. and Colo. Also Norway.

Flowering Season: Mid-June to August.

Illustration: Ames, Orchidaceae, fasc. 4, pl. 65; Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 75 (427), figs. I & II, 1–4 (as *Platanthera obtusata*).

23. Habenaria odontopetala *Reichenbach filius*, in Linnaea, vol. 18, p. 407 (1844).

Synonymy:

Habenaria Garberi *Porter* in Botanical Gazette, vol. 5, p. 135 (1880).

Platanthera Garberi *Chapman*, Flora Southern United States, ed. 3, p. 486 (1897).

Habenella Garberi *Small*, Flora Southeastern United States, ed. 1, p. 316 (1903).

Geographical Distribution: Fla. Also Cuba, Mexico and Guatemala.

Flowering Season: Late October to March.

Illustration: Ames in Proceeding Biological Society Washington, vol. 16, p. 118, fig. 2; Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 2.

24. Habenaria orbiculata (*Pursh*) *Torrey*, Compendium Flora Northern and Middle States, p. 318 (1826).

Synonymy:

Orchis orbiculata *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 588 (1814).

Platanthera Menziesii *Lindley*, Genera and Species Orchidaceous Plants, p. 286 (1835).

Platanthera orbiculata *Lindley*, Genera and Species Orchidaceous Plants, p. 286 (1835).

Habenaria Menziesii *Macoun*, Catalogue Canadian Plants, pt. 4, p. 17 (1888).

Lysias orbiculata *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 103 (1900).

Habenaria orbiculata var. longifolia *Clute* in American Botanist, vol. 7, p. 56, in text (1904).

Common Name: Large Round-leaved Orchis.

Geographical Distribution: Nfd., Lab., N. S., P. E. I., N. B., Que., Ont., Manitoba, B. C. and Alaska; Me., N. H., Vt., Mass., Conn., N. Y., Pa., W. Va. and Md. south to S. C. (in the mountains); Tenn., O., Ill., Mich. west to Minn., also Mont., Idaho and Wash.

Flowering Season: July and August (occasionally June).

Illustration: Loddiges, Botanical Cabinet, vol 17, pl. 1623; Ames in Rhodora, vol. 8, p. 2, fig.; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 35 and fig. VIII (as *Lysias orbiculata*).

25. Habenaria peramoena *A. Gray* in American Journal of Science, vol. 38, p. 310 (1840).

Synonymy:

Platanthera peramoena *A. Gray*, Manual Botany Northern United States, ed. 1, p. 473 (1848).

Blephariglottis peramoena *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 297 (1901).

Common Name: Fringeless Purple Orchis.

Geographical Distribution: Pa. and Del. south to Md., N. C., Ala., Tenn., Ky., W. Va.; O. westward to Ill. and Mo.

Flowering Season: July and August (sometimes June in the south).

Illustration: Gibson, Our Native Orchids, pl. 27.

26. **Habenaria psycodes** (*Linnaeus*) *Sprengel*, Systema Vegetabilium, vol. 3, p. 693 (1826), as to synonymy and name, exclude description (as *psychodes*) and *Swartz*, Adnotationes Botanicae, p. 45 (1829).

SYNONYMY:

Orchis psycodes *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 943 (1753).

Platanthera psychodes *Lindley*, Genera and Species Orchidaceous Plants, p. 294 (1835), as to name and synonym *Orchis psycodes* Linnaeus, exclude description and all other synonymy.

Blephariglottis psychodes *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 296 (1901).

Habenaria psycodes var. ecalcarata *Bryan* in Annals Missouri Botanical Garden, vol. 4, p. 38, pl. 5, fig. C (1917).

Habenaria psycodes var. varians *Bryan* in Annals Missouri Botanical Garden, vol. 4, p. 37, pl. 5, fig. B (1917).

COMMON NAME: Small Purple Fringed Orchis, Smaller Purple-fringed Orchis.

GEOGRAPHICAL DISTRIBUTION: Nfd., Anticosti, N. S., P.E.I., N. B., Que., Ont.; New England and N. Y. south to N. C.; O., Ill. and Mich. westward to Minn., Wisc. and Ia.

FLOWERING SEASON: July and August (occasionally June in the south).

ILLUSTRATION: Ames, Orchidaceae, fasc. 4, pl. 66, fig. I; Mathews, Field Book American Wild Flowers, p. 92, pl.; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 39A (as *Blephariglottis psycodes*).

27. **Habenaria quinqueseta** (*Michaux*) *Swartz*, Adnotationes Botanicae, p. 46 (1829).

SYNONYMY:

Orchis quinqueseta *Michaux*, Flora Boreali-americana, vol. 2, p. 155 (1803).

Habenaria Michauxii *Nuttall*, Genera North American Plants, vol. 2, p. 189 (1818).

Mesicera Michauxii *Rafinesque*, Flora Telluriana, vol. 2, p. 39 (1837).

Platanthera Michauxii *Wood*, Class-book of Botany, p. 685 (1861).

Orchis Michauxii *Wood*, American Botanist and Florist, p. 328 (1870).

Habenaria Simpsonii *Small*, Flora Southeastern United States, ed. 1, p. 315 (1903).

Geographical Distribution: S. C. (Beaufort Co.), Fla., Ala. (Tuscaloosa Co.), and Tex. (one record).

Flowering Season: Late August to November.

Illustration: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 1 (as *H. Michauxii*); Ames, Orchidaceae, fasc. 4, pl. 71.

28. Habenaria repens *Nuttall*, Genera North American Plants, vol. 2, p. 190 (1818).

Synonymy: Orchis repens *Rafinesque*, Neogenyton, p. 4 (1825), *nomen*, sub Mesicera, and *Wood*, American Botanist and Florist, p. 328 (1870).

Platanthera repens *Wood*, Class-book of Botany, p. 685 (1861).

Habenaria Nuttallii *Small*, Flora Southeastern United States, ed. 1, p. 315 (1903).

Geographical Distribution: Va. (Williamsburg) to Fla., Ala. and La. Also West Indies, and Central and South America.

Flowering Season: May to December (very rarely April in Fla.).

Illustration: Hooker's Icones Plantarum, pl. 2686; Ames, Orchidaceae, fasc. 1, pl. 14.

29. Habenaria saccata *Greene* in Erythea, vol. 3, p. 49 (1895).

Synonymy:

Platanthera gracilis *Lindley*, Genera and Species Orchidaceous Plants, p. 288 (1835).

Platanthera stricta *Lindley*, Genera and Species Orchidaceous Plants, p. 288 (1835).

Habenaria gracilis *S. Watson* in Proceedings American Academy, vol. 12, p. 277, in text (1877), not Colebrook nor Lindley.

Habenaria dilatatiformis *Rydberg* in Bulletin Torrey Botanical Club, vol. 24, p. 189 (1897), in part.

Habenaria stricta *Rydberg* in Bulletin Torrey Botanical Club, vol. 24, p. 189 (1897), not A. Richard & Galeotti nor Ridley.

Limnorchis stricta *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 105 (1900).

Limnorchis brachypetala *Rydberg* in Bulletin New York Botanical Garden, vol. 2, p. 161 (1901), in part.

Limnorchis gracilis *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 627 (1901), exclude *Onion* specimen.

Limnorchis laxiflora *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 630 (1901), as to *Wilkes* and *Hall* specimens.

Common Name: Slender Bog Orchid.

Geographical Distribution: Alberta, B. C., Vancouver Island and Alaska; Mont., Wyo., Colo., Idaho, Wash., Ore., Calif. and Ariz.

Flowering Season: June, July and August.

Illustration: Ames, Orchidaceae, fasc. 4, pl. 61, fig. I.

30. Habenaria sparsiflora *S. Watson* in Proceedings American Academy, vol. 12, p. 276 (1877).

Synonymy:

Limnorchis ensifolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 629 (1901).

Limnorchis laxiflora *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 630 (1901), exclude *Wilkes* and *Hall* specimens.

Limnorchis sparsiflora *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 631 (1901).

Habenaria aggregata *Howell*, Flora Northwestern America, p. 628 (1902).

Limnorchis aggregata *Frye & Rigg*, Northwest Flora, p. 114 (1912).

Habenaria laxiflora *S. B. Parish* in Plant World, vol. 20, p. 209 (1917).

Common Name: Sparsely Flowered Bog Orchid.

Geographical Distribution: Utah, Nev., Ore., Calif., Colo., N. Mex. and Ariz.

Flowering Season: June to August (rarely September).

Illustration: Ames, Orchidaceae, fasc. 4, pl. 61, fig. II.

31. **Habenaria unalascensis** (*Sprengel*) *S. Watson* in Proceedings American Academy, vol. 12, p. 277, in text (1877).

Synonymy:

Spiranthes unalascensis *Sprengel*, Systema Vegetabilium, vol. 3, p. 708 (1826).

Habenaria Schischmareffiana *Chamisso* in Linnaea, vol. 3, p. 33 (1828).

Platanthera Schischmareffiana *Lindley*, Genera and Species Orchidaceous Plants, p. 286 (1835).

Herminium unalaschcense *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 107, pl. 65 (417), figs. I, 1–4 (1851).

Platanthera foetida *Geyer* ex Hooker in Hooker's Journal of Botany and Kew Garden Miscellany, vol. 7, p. 376 (1855), *nomen.*

Habenaria foetida *S. Watson* in King, Report Geological Exploration Fortieth Parallel, vol. 5, Botany (Botany King Expedition), p. 341 (1871).

Habenaria Cooperi *S. Watson* in Proceedings American Academy, vol. 12, p. 276 (1877).

Platanthera unalaschcensis *Kurtz* in Engler Botanische Jahrbücher, vol. 19, p. 408 (1895).

Montolivaea unalaschensis *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 107 (1900).

Piperia unalaschensis *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, pp. 270, 635 (1901).

Piperia Cooperi *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 636 (1901).

Piperia lancifolia *Rydberg* in Bulletin Torrey Botanical Club, vol. 28, p. 637 (1901).

Common Name: Alaska Piperia, Cooper's Piperia, Lance-leaved Piperia.

Geographical Distribution: Anticosti, Que., Ont., Alberta, B.C. and Alaska (Unalaska); Mont., Wyo., Utah, Idaho, Wash., Ore. and Calif. Also Mexico (Lower Calif.).

Flowering Season: June to August (more rarely April, May and September).

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 65 (417), figs. I, 1–4 (as *Herminium unalaschcense*).

32. Habenaria viridis (*Linnaeus*) *R. Brown* var. bracteata (*Muhlenberg*) *A. Gray*, Manual Botany Northern United States, ed. 5, p. 500 (1867).

Synonymy:

Orchis bracteata *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 34 (1805).

Habenaria bracteata *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 192 (1813).

Orchis viridis *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 587 (1814), exclude synonymy in part.

Peristylus bracteatus *Lindley*, Genera and Species Orchidaceous Plants, p. 298 (1835).

Platanthera bracteata *Torrey*, Flora State of New York, vol. 2, p. 279 (1843).

Platanthera viridis var. bracteata *Reichenbach filius*, Icones Florae Germanicae et Helveticae, vol. 13 & 14, p. 130, pl. 83 (435), figs. I, 1–3 (1851).

Coeloglossum bracteatum *Parlatore*, Flora Italiana, vol. 3, p. 409, in text (1860).

COMMON NAME: Long-bracted Orchis, Satyr Orchis, Long-bracted Habenaria.

GEOGRAPHICAL DISTRIBUTION: Nfd., N. S., N. B., Que., Keewatin to B. C. and Alaska; New England, N. Y., N. J. and Pa.; westward from O., Mich., Wisc., and Ill. to Neb., S. Dak., Mont., Wyo. and Wash. Also Japan and China.

FLOWERING SEASON: May, June, July and August (depending on latitude and altitude).

ILLUSTRATION: Hooker, Exotic Flora, vol. 3, pl. 175 (as *H. bracteata*).

HARRISELLA *Fawcett & Rendle*

1. Harrisella porrecta (*Reichenbach filius*) *Fawcett & Rendle* in Journal of Botany, vol. 47, p. 266 (1909), and *Cogniaux* in Urban, Symbolae Antillanae, vol. 6, p. 688 (1910).

SYNONYMY:

Aëranthus porrectus *Reichenbach filius* in Flora, vol. 48, p. 279 (1865).

Campylocentrum porrectum *Rolfe* in Orchid Review, vol. 11, p. 247 (1903).

Harrisella Amesiana *Cogniaux* in Urban, Symbolae Antillanae, vol. 6, p. 687 (1910).

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, and Yucatan and Salvador.

FLOWERING SEASON: August (in Fla.).

ILLUSTRATION: Ames, Orchidaceae, fasc. 1, pl. 4 (as *Campylocentrum porrectum*); Fawcett & Rendle, Flora Jamaica, vol. 1, pl. 31, figs. 16–21.

HEXALECTRIS *Rafinesque*

1. **Hexalectris spicata** (*Walter*) *Barnhart* in Torreya, vol. 4, p. 121 (1904).

SYNONYMY:

Arethusa spicata *Walter*, Flora Caroliniana, p. 222 (1788).

Bletia aphylla *Nuttall*, Genera North American Plants, vol. 2, p. 194 (1818).

Hexalectris aphylla *Rafinesque*, Neogenyton, p. 4 (1825), *combination not made;* ex S. Watson & Coulter in A. Gray, Manual Botany Northern United States, ed. 6, p. 501 (1890).

Hexalectris squamosa *Rafinesque*, Flora Telluriana, vol. 4, p. 48 (1838).

Corallorrhiza arizonica *S. Watson* in Proceedings American Academy, vol. 17, p. 379 (1882).

COMMON NAME: Crested Coral Root.

GEOGRAPHICAL DISTRIBUTION: Va. (*Grimes*), N. C. south to Fla. and west to Tenn., Ky., Mo., Tex. and Ariz. Also northern Mexico.

FLOWERING SEASON: July and August.

ILLUSTRATION: Britton & Brown, Illustrated Flora Northern United States, Canada, etc., ed. 1, vol. 1, fig. 1146 (as *H. aphyllus*).

HORMIDIUM *Lindley*

1. **Hormidium pygmaeum** (*Hooker*) *Bentham & Hooker filius* ex Hemsley in Gardeners' Chronicle, ser. 2, vol. 19, p. 700 (June 1883) and in Godman & Salvin, Biologia Centrali-americana, Botany, vol. 3, p. 218 (November 1883).

SYNONYMY:

Epidendrum pygmaeum *Hooker* in Botanical Magazine, pl.

3233 (1833) and in Hooker's Journal of Botany, vol. 1, p. 49, pl. 118 (before May 1834).

Coelogyne triptera *Brongniart* in Duperry, Voyage Autour du Monde Coquille, Phanérogamie, p. 201, pl. 42A (July 1834).

Hormidium tripterum *Cogniaux* in Martius, Flora Brasiliensis, vol. 3, pt. 5, p. 29, pl. 8, fig. II (1898).

COMMON NAME: Dwarf Epidendrum.

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, Mexico, and Central and South America.

FLOWERING SEASON: March.

ILLUSTRATION: Botanical Magazine, pl. 3233 (as *Epidendrum pygmaeum*); Ames, Orchidaceae, fasc. 2, pl. 20 (as *H. tripterum*).

IONOPSIS *R. Brown*

1. Ionopsis utricularioides (*Swartz*) *Lindley*, Collectanea Botanica, pl. 39, fig. A (1825).

SYNONYMY:

Epidendrum utricularioides *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 122 (1788).

Ionopsis tenera *Lindley* in Botanical Register, vol. 22, pl. 1904 (1836).

COMMON NAME: Delicate Ionopsis.

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, Trinidad, Mexico, and Central and South America.

FLOWERING SEASON: March and later.

ILLUSTRATION: Botanical Register, vol. 22, pl. 1904 (as *I. tenera*); Ames, Orchidaceae, fasc. 1, pl. 5.

ISOTRIA *Rafinesque*

1. **Isotria affinis** (*Austin*) *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 297 (1901).

SYNONYMY:

Pogonia affinis *Austin* ex A. Gray, Manual Botany Northern United States, ed. 5, p. 507 (1867).

Odonectis affinis *Schlechter* in Engler Botanische Jahrbücher, vol. 45, p. 386 (1911).

COMMON NAME: Smaller Whorled Pogonia.

GEOGRAPHICAL DISTRIBUTION: Vt. (Burlington), Mass. (East Hadley), Conn. (New Haven, Ledyard, Stratford, Waterford and Brown's Meadow), N. Y. (Long Island — Hempstead), N. J. (Closter — exterminated — and reported from Norwood and Trenton), Pa. (Westtown, reported from Water Gap and from Monroe, Berks and Philadelphia Cos.), and Va. (Williamsburg).

FLOWERING SEASON: May 9 to June 3.

ILLUSTRATION: Ames, Orchidaceae, fasc. 7, pl. 107.

2. **Isotria verticillata** (*Muhlenberg*) *Rafinesque* in Medical Repository New York, Hexade 2, vol. 5, p. 357 (1808).

SYNONYMY:

Arethusa verticillata *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 81 (1805).

Odonectis verticillata *Rafinesque* in Medical Repository New York, Hexade 2, vol. 5, p. 357 (1808).

Arethusa medeoloides *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 591 (1814).

Pogonia verticillata *Nuttall*, Genera North American Plants, vol. 2, p. 192 (1818).

Isotria medeoloides *Rafinesque*, Flora Telluriana, vol. 4, p. 47 (1838).

Common Name: Whorled Pogonia.

Geographical Distribution: Southern Me., southern N. H., Mass., R. I., Conn., N. Y., Pa. west to Ind. and Mich., and south to Fla., Tex. and Ark.

Flowering Season: May and June.

Illustration: Ames, Orchidaceae, fasc. 7, pls. 105 & 106.

LIMODORUM *Linnaeus*

1. **Limodorum tuberosum** *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 950 (1753), exclude synonymy in part.

Synonymy:

Limodorum purpureum *Lamarck*, Encyclopédie Méthodique Botanique, vol. 3, p. 515 (1791).

Limodorum verecundum *Salisbury*, Prodromus Stirpium Horto Chapel Allerton, p. 9 (1796).

Limodorum trifidum *Michaux*, Flora Boreali-americana, vol. 2, p. 159 (1803).

Bletia verecunda *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 206 (1813).

Bletia purpurea *De Candolle* in Mémoires Société Physique et Histoire Naturelle Genève, vol. 9, pt. 1, pp. 97, 100 (1841) and Huitième Notice Plantes Rares Jardin Genève, p. 23 (1841).

Bletia alta *Hitchcock* in Annual Report Missouri Botanical Garden, vol. 4, p. 132 (1893), exclude synonym *Limodorum altum*.

Common Name: Sharp-petaled Bletia, Purple Bletia.

Geographical Distribution: Fla. Also West Indies and Central America.

Flowering Season: November to May.

Illustration: Botanical Magazine, pl. 3217 (as *Bletia acutipetala*); Fawcett & Rendle, Flora Jamaica, vol. 1, pl. 21,

figs. 1–7 (as *Bletia purpurea*); Martyn, Historia Plantarum Rariorum Centuriae Primae, pl. 50 (1728) (as *Helleborine Americana; etc.*).

LIPARIS *L. C. Richard*

1. **Liparis elata** *Lindley* in Botanical Register, vol. 14, pl. 1175 (1828).

SYNONYMY:

Liparis elata var. latifolia *Ridley* in Journal Linnean Society, vol. 22, p. 260 (1886).

Leptorchis elata *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 671 (1891).

COMMON NAME: Tall Liparis.

GEOGRAPHICAL DISTRIBUTION: Fla. Also West Indies, Trinidad, Mexico, and Central and South America.

FLOWERING SEASON: June and September.

ILLUSTRATION: Botanical Register, vol. 14, pl. 1175; Loddiges, Botanical Cabinet, pl. 1558; Ames, Orchidaceae, fasc. 1, pl. 13 (as var. *latifolia*).

2. **Liparis liliifolia** (*Linnaeus*) *Richard* ex Lindley in Botanical Register, vol. 11, sub pl. 882 (1825).

SYNONYMY:

Ophrys liliifolia *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 946 (1753).

Ophrys trifolia *Walter*, Flora Caroliniana, p. 221 (1788).

Leptorchis liliifolia *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 671 (1891).

COMMON NAME: Large Twayblade, Lily-leaved Malaxis.

GEOGRAPHICAL DISTRIBUTION: N. H., Vt., Mass., Conn., N. Y., N. J., and Pa. south to Ga. and Ala., westward to O., Ill., Minn., Mo. and Ia.

FLOWERING SEASON: June and July (rarely May).

Illustration: Botanical Magazine, pl. 2004 (as *Malaxis lilifolia*).

3. Liparis Loeselii (*Linnaeus*) *L. C. Richard*, De Orchideis Europaeis Annotationes, p. 38 (1817) (in Mémoires Muséum d'Histoire Naturelle Paris, vol. 4, p. 60 (1818)).

Synonymy:

Ophrys Loeselii *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 947 (1753).

Malaxis Correana *Barton*, Florae Philadelphicae Prodromus, p. 86 (1815).

Malaxis longifolia *Barton*, Compendium Florae Philadelphicae, vol. 2, p. 142 (1818).

Liparis Correana *Sprengel*, Systema Vegetabilium, vol. 3, p. 740 (1826).

Leptorchis Loeselii *MacMillan*, Metaspermae Minnesota Valley, p. 173 (1891).

Common Name: Loesel's Twayblade, Fen Orchis.

Geographical Distribution: N. S., N. B., P. E. I., Que., Ont.; New England, N. Y., N. J., Pa. and D. C. west to Ind. and Wisc.

Flowering Season: June and July (rarely August in Mich.).

Illustration: Baxter, British Phaenogamous Botany, vol. 6, pl. 414; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 42B.

LISTERA *R. Brown*

1. Listera auriculata *Wiegand* in Bulletin Torrey Botanical Club, vol. 26, p. 166, pl. 356, fig. 2 (1899).

Synonymy:

Ophrys auriculata *House* in Bulletin Torrey Botanical Club, vol. 32, p. 379 (1905).

Bifolium auriculatum *Nieuwland* in American Midland Naturalist, vol. 3, p. 129 (1913).

Common Name: Auricled Twayblade.

Geographical Distribution: Nfd., Que., Ont.; Me., N. H. and Mich.

Flowering Season: Late June, July and sometimes August.

Illustration: Gray's New Manual, ed. 7, p. 316, fig.; Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 356, fig. 2.

2. Listera australis *Lindley*, Genera and Species Orchidaceous Plants, p. 456 (1840).

Synonymy:

Ophrys australis *House* in Bulletin Torrey Botanical Club, vol. 32, p. 379 (1905).

Bifolium australe *Nieuwland* in American Midland Naturalist, vol. 3, p. 129 (1913).

Common Name: Southern Twayblade.

Geographical Distribution: Ont. (Ottawa), northern Vt. (Lamoille Co.), N. Y., N. J. south to Fla. and La.

Flowering Season: June, July (in the north), February and March (in the south).

Illustration: Gibson, Our Native Orchids, pl. 43, fig. 3; Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 357, fig. 10.

3. Listera borealis *Morong* in Bulletin Torrey Botanical Club, vol. 20, p. 31 (1893).

Synonymy: Ophrys borealis *Rydberg* in Bulletin Torrey Botanical Club, vol. 32, p. 610 (1905).

Common Name: Northern Twayblade.

Geographical Distribution: Hudson Bay, Mackenzie, Alberta, Yukon, Colo. and Idaho.

Flowering Season: Late June and July.

ILLUSTRATION: Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 356, fig. 5.

4. Listera caurina *Piper* in Erythea, vol. 6, p. 32 (1898).

SYNONYMY:

Listera retusa *Suksdorf* in Deutsche Botanische Monatsschrift, vol. 18, p. 155 (1900).

Ophrys caurina *Rydberg* in Bulletin Torrey Botanical Club, vol. 32, p. 610 (1905).

COMMON NAME: Northwestern Twayblade.

GEOGRAPHICAL DISTRIBUTION: Mont., Idaho, Wash., Ore. and B. C.

FLOWERING SEASON: July (rarely June).

ILLUSTRATION: Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 357, fig. 8.

Note. Listera Eschscholziana Chamisso, which is questionably referred to *L. convallarioides* (Swartz) Nuttall, may be conspecific with *L. caurina* Piper.

5. Listera convallarioides (*Swartz*) *Nuttall*, Genera North American Plants, vol. 2, p. 191 (1818), *nomen* and *Torrey*, Compendium Flora Northern and Middle States, p. 320 (1826).

SYNONYMY:

Epipactis convallarioides *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 232 (1800).

? Listera Eschscholziana *Chamisso* in Linnaea, vol. 3, p. 33 (1828).

Ophrys convallarioides *Wight* ex House in Bulletin Torrey Botanical Club, vol. 32, p. 380 (1905).

Bifolium convallarioides *Nieuwland* in American Midland Naturalist, vol. 3, p. 129 (1913).

COMMON NAME: Broad-leaved Twayblade.

GEOGRAPHICAL DISTRIBUTION: Nfd. west to Alaska, southward to northern New England, N. Y., Mich., Rocky Mts. and Calif.

Flowering Season: Late June to August.

Illustration: Hooker, Flora Boreali-Americana, pl. 205; Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 357, fig. 6.

6. **Listera cordata** (*Linnaeus*) *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 201 (1813).

Synonymy:

Ophrys cordata *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 946 (1753).

Listera nephrophylla *Rydberg* in Memoirs New York Botanical Garden, vol. 1 (Flora Montana), p. 108 (1900).

Ophrys nephrophylla *Rydberg* in Bulletin Torrey Botanical Club, vol. 32, p. 610 (1905).

Bifolium cordatum *Nieuwland* in American Midland Naturalist, vol. 3, p. 129 (1913).

Common Name: Heart-leaved Twayblade.

Geographical Distribution: Nfd., Lab., N. S., N. B., P. E. I., Que., Ont., Alberta, B. C., Vancouver Island, Alaska and Aleutian Islands; New England, N. Y., N. J. westward to Mont., Wyo., Colo., Wash., Ore., Calif. and N. Mex. Also Greenland, Iceland, Europe and Japan.

Flowering Season: Late May (at low altitudes) to August, (very rarely April).

Illustration: Loddiges, Botanical Cabinet, vol. 6, pl. 532; Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 357, fig. 9.

7. **Listera reniformis** *Small* in Bulletin Torrey Botanical Club, vol. 24, p. 334 (1897), not D. Don which is a species of Habenaria.

Synonymy:

Listera Smallii *Wiegand* in Bulletin Torrey Botanical Club, vol. 26, p. 169, pl. 357, fig. 7 (1899).

Ophrys Smallii *House* in Bulletin Torrey Botanical Club, vol. 32, p. 379 (1905).

Bifolium Smallii *Nieuwland* in American Midland Naturalist, vol. 3, p. 129 (1913).

Common Name: Kidney-leaf Twayblade.

Geographical Distribution: Southern Pa., Md., Va. and N. C.

Flowering Season: Mid-June and July.

Illustration: Wiegand in Bulletin Torrey Botanical Club, vol. 26, pl. 357, fig. 7 (as *L. Smallii*).

MACRADENIA *R. Brown*

1. **Macradenia lutescens** *R. Brown* in Botanical Register, vol. 8, pl. 612 (1822).

Synonymy: Rhynchadenia cubensis *A. Richard* in Sagra, Historia Isla Cuba, Segunda parte: Historia natural, vol. 11 (Flora Cubana Fanerogamia, vol. 2), p. 248, pl. 85 (1850).

Common Name: Trinidad Macradenia.

Geographical Distribution: Fla. Also Cuba, Jamaica, Trinidad, Colombia and Venezuela.

Flowering Season: December (in Fla.).

Illustration: Botanical Register, vol. 8, pl. 612; Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 11.

MALAXIS *Swartz*

1. **Malaxis corymbosa** (*S. Watson*) *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 673 (1891).

Synonymy:

Microstylis corymbosa *S. Watson* in Proceedings American Academy, vol. 18, p. 195 (1883).

Achroanthes corymbosa *Greene* in Pittonia, vol. 2, p. 184 (1891).

Geographical Distribution: Ariz. (Huachuca Mts.). Also Mexico.

Flowering Season: July.

2. **Malaxis Ehrenbergii** (*Reichenbach filius*) *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 673 (1891).

Synonymy:

Microstylis Ehrenbergii *Reichenbach filius* in Linnaea, vol. 22, p. 835 (1849).

Microstylis purpurea *S. Watson* in Proceedings American Academy, vol. 18, p. 195 (1883).

Microstylis porphyrea *Ridley* in Journal Linnean Society, vol. 22, p. 320 (1886).

Malaxis porphyrea *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 673 (1891).

Malaxis purpurea *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 673 (1891).

Achroanthes purpurea *Greene* in Pittonia, vol. 2, p. 184 (1891).

Achroanthes porphyrea *Wooton & Standley* in Contributions United States National Herbarium, vol. 16, p. 116 (1913).

Geographical Distribution: Ariz. (Huachuca Mts.), N. Mex. Also Mexico.

Flowering Season: July and August.

3. **Malaxis monophyllos** (*Linnaeus*) *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 234, pl. 3, fig. P (1800).

Synonymy:

Ophrys monophyllos *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 947 (1753).

Malaxis diphyllos *Chamisso* in Linnaea, vol. 3, p. 34 (1828).

Microstylis diphyllos *Lindley*, Genera and Species Orchidaceous Plants, p. 19 (1830).

Microstylis monophyllos *Lindley*, Genera and Species Orchidaceous Plants, p. 19 (1830).

Achroanthes monophylla *Greene* in Pittonia, vol. 2, p. 183 (1891).

Common Name: White Adder's Mouth.

Geographical Distribution: Nfd., Lab., N. B., Que.; Me., N. H., Vt., Mass., Conn., N. Y. to Manitoba and southward to Pa., Ind., Mich. and Minn., Tex. and Calif. Also Europe and Asia.

Flowering Season: June to August.

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 141 (493) (as *Microstylis monophyllos* and *M. diphyllos*).

4. **Malaxis montana** (*Engelmann*) *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 673 (1891).

Synonymy:

Microstylis montana *Engelmann* ex Rothrock in Wheeler, Report United States Geological Surveys west of 100th Meridian, vol. 6, p. 264 (1878).

Achroanthes montana *Greene* in Pittonia, vol. 2, p. 183 (1891).

Geographical Distribution: Ariz. and N. Mex. Also Mexico.

Flowering Season: September.

5. **Malaxis paludosa** (*Linnaeus*) *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 235 (1800).

Synonymy:

Ophrys paludosa *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 947 (1753).

Hammarbya paludosa *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 665 (1891).

Common Name: Marsh Malaxis.

Geographical Distribution: Minn. (Otter Tail and Clearwater Cos.), Ont. (Port Arthur) and Alaska (Ketchikan). Also Europe and Asia.

Flowering Season: July and August.

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 142 (494).

6. **Malaxis spicata** *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 119 (1788).

Synonymy:

Microstylis spicata *Lindley*, Genera and Species Orchidaceous Plants, p. 19 (1830).

Microstylis floridana *Chapman*, Flora Southern United States, ed. 1, p. 454 (1860).

Malaxis floridana *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 673 (1891).

Achroanthes floridana *Greene* in Pittonia, vol. 2, p. 183 (1891).

Common Name: Slender Malaxis.

Geographical Distribution: Fla. Also Bahama Islands and West Indies.

Flowering Season: November to February, also August and September (in Fla.).

Illustration: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 6 (as *Microstylis floridana*).

7. **Malaxis tenuis** (*S. Watson*) *Ames* in Proceedings Biological Society Washington, vol. 35, p. 85 (1922).

Synonymy: Microstylis tenuis *S. Watson* in Proceedings American Academy, vol. 26, p. 152 (1891).

Geographical Distribution: N. Mex. (Pinos Altos Mts., *Greene 399*). Also Mexico.

Flowering Season: September (in N. Mex.).

8. Malaxis unifolia *Michaux*, Flora Boreali-americana, vol. 2, p. 157 (1803).

Synonymy:

Malaxis ophioglossoides *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 90 (1805).

Achroanthes unifolia *Rafinesque* in Medical Repository New York, Hexade 2, vol. 5, p. 352 (1808).

Microstylis ophioglossoides *Nuttall*, Genera North American Plants, vol. 2, p. 196 (1818), under Malaxis as a subgenus; ex A. Eaton, Manual Botany Northern and Middle States, ed. 3, p. 353 (1822).

Microstylis unifolia *Britton, Sterns & Poggenberg*, Preliminary Catalogue Anthophyta and Pteridophyta New York, p. 51 (1888).

Common Name: Green Adder's Mouth.

Geographical Distribution: Nfd., N. S., N. B., P. E. I. and Que. to Manitoba; New England, N. Y., Pa., locally south to Ky. and Ga.; O., Ill., Mich. and Wisc. Also Cuba, Jamaica and Mexico.

Flowering Season: July and August (rarely June).

Illustration: Loddiges, Botanical Cabinet, vol. 12, pl. 1146 (as *M. ophioglossoides*).

ONCIDIUM *Swartz*

1. Oncidium carthaginense (*Jacquin*) *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 240 (1800).

Synonymy:

Epidendrum carthagenense *Jacquin*, Enumeratio Systematica Plantarum Caribaeis, p. 30 (1760) and Selectarum Stirpium Americanarum, p. 228, pl. 133, fig. 4 (1763).

Oncidium undulatum *Salisbury* in Transactions Horticultural Society, vol. 1, ed. 1, p. 295 (1812), exclude synonym *Epidendrum undulatum* Swartz.

Common Name: Spread-eagle Oncidium.

Geographical Distribution: Fla. Also Mexico, and Central and South America.

Flowering Season: April (in Fla.).

Illustration: Cogniaux in Dictionnaire Iconographie Orchidées, Oncidium pl. 25.

2. Oncidium floridanum *Ames*, Schedulae Orchidianae, No. 7, p. 13 (1924).

Synonymy: Oncidium sphacelatum *Ames*, Contribution to Knowledge Orchid Flora Southern Florida, p. 22 (exclude plate) (1904), not Lindley.

Geographical Distribution: Florida.

Flowering Season: November and December, also May.

Illustration: Ames, Schedulae Orchidianae, No. 7, p. 15, fig. 2.

3. Oncidium luridum *Lindley* in Botanical Register, vol. 9, pl. 727 (1823).

Synonymy:

Epidendrum undulatum *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 122 (1788), not *Oncidium undulatum* Lindley.

Oncidium luridum var. guttatum *Lindley* in Botanical Register, vol. 25, pl. 16 (1839).

Oncidium guttatum *Reichenbach filius* in Walpers, Annales Botanices Systematicae, vol. 6, p. 782 (1863).

Oncidium maculatum *Urban* in Fedde, Repertorium Specierum Novarum Regni Vegetabilis, vol. 15, p. 306 (1918), not Lindley.

Common Name: Dingy-flowered Oncidium.

Geographical Distribution: Fla. Also West Indies, Trinidad, and Central and South America.

Flowering Season: December (in Fla.).

Illustration: Botanical Magazine, pl. 3603; Botanical Register, vol. 25, pl. 16 (as *O. luridum* var. *guttatum*).

4. Oncidium variegatum *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 240 (1800).

Synonymy:

Epidendrum variegatum *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 122 (1788).

Oncidium velutinum *Lindley* in Paxton, Flower Garden, vol. 1, p. 166 (1851).

Oncidium sylvestre *Lindley* in Annals and Magazine Natural History, ser. 3, vol. 1, p. 332 (1858).

Geographical Distribution: Fla. Also West Indies.

Flowering Season: November to June (in West Indies).

Illustration: Ames, Orchidaceae, fasc. 1, p. 110, fig.

ORCHIS *Linnaeus*

1. Orchis aristata *Fischer* ex Lindley, Genera and Species Orchidaceous Plants, p. 262 (1835).

Geographical Distribution: Unalaska.

Flowering Season: Late June to August.

Illustration: Reichenbach filius, Icones Florae Germanicae et Helveticae, vol. 13 & 14, pl. 58 (410).

2. Orchis rotundifolia *Banks* ex Pursh, Flora Americae Septentrionalis, vol. 2, p. 588 (1814).

Synonymy:

Habenaria rotundifolia *Richardson* in Franklin, Narrative Journey to Polar Sea, Botanical Appendix, quarto ed. 1, p. 750 (Separate, p. 22) (1823).

Platanthera rotundifolia *Lindley*, Genera and Species Orchidaceous Plants, p. 292 (1835).

Common Name: Small Round-leaved Orchis.

Geographical Distribution: Anticosti, Hudson Bay, eastern

Que. to Alberta and Yukon; southward to northern Me., northern Vt., N. Y., and Wisc. and Mont.

FLOWERING SEASON: June and July.

ILLUSTRATION: Hooker, Flora Boreali-americana, vol. 2, pl. 201 (as *Platanthera rotundifolia*).

3. **Orchis spectabilis** *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 943 (1753).

SYNONYMY:

Orchis humilis *Michaux*, Flora Boreali-americana, vol. 2, p. 155 (1803).

Habenaria spectabilis *Sprengel*, Systema Vegetabilium, vol. 3, p. 689 (1826).

Orchis spectabilis var. lilacina *Ames* in American Gardening, vol. 21, p. 375 (1900).

Galeorchis spectabilis *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 292 (1901).

COMMON NAME: Showy Orchis, Showy American Orchis.

GEOGRAPHICAL DISTRIBUTION: N. B., Que., Ont.; New England and N. Y. south to Ga., Tenn. and westward to Mich., Minn., Mo. and Neb.

FLOWERING SEASON: May and June.

ILLUSTRATION: Hooker, Exotic Flora, vol. 1, pl. 69; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 34.

PLEUROTHALLIS *R. Brown*

1. **Pleurothallis gelida** *Lindley* in Botanical Register, vol. 27, Miscellanies, p. 91 (1841).

SYNONYMY: Humboldtia gelida *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 667 (1891).

GEOGRAPHICAL DISTRIBUTION: Fla. Also Jamaica and Santo Domingo.

Flowering Season: March to June.

Illustration: Kränzlin, Xenia Orchidacea, vol. 3, pl. 267, figs. II, 8–12.

POGONIA *Jussieu*

1. **Pogonia ophioglossoides** (*Linnaeus*) *Ker-Gawler* in Botanical Register, vol. 2, pl. 148 (1816).

Synonymy: Arethusa ophioglossoides *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 951 (1753).

Common Name: Adder's-tongue-leaved Pogonia, Rose Pogonia, Snake Mouth.

Geographical Distribution: Nfd., N. S., N. B., P. E. I., Que., Ont.; New England, N. Y., N. J., Del., Pa., O. west to Ill. and Minn., south to Fla., Ala., Miss. and Tex.

Flowering Season: March to May (in the south), June to August (in the north).

Illustration: Hooker, Exotic Flora, vol. 1, pl. 70; House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 40; Ames, Orchidaceae, fasc. 7, pl. 104.

Forma **albiflora** *Rand & Redfield*, Flora Mount Desert Island, p. 152 (1894).

Geographical Distribution: Me. (Mt. Desert).

Var. **brachypogon** *Fernald* in Rhodora, vol. 23, p. 245 (1921).

Geographical Distribution: Nova Scotia.

Flowering Season: July.

POLYRRHIZA *Pfitzer*

1. **Polyrrhiza Lindenii** (*Lindley*) *Cogniaux* in Urban, Symbolae Antillanae, vol. 6, p. 680 (1910).

Synonymy:

Angraecum Lindenii *Lindley* in Gardeners' Chronicle, 1846, p. 135, in text (1846).

Aëranthus Lindenii *Reichenbach filius* in Walpers, Annales Botanices Systematicae, vol. 6, p. 902 (1864).

Dendrophylax Lindenii *Bentham* ex Rolfe in Gardeners' Chronicle, ser. 3, vol. 4, p. 533, in text (1888).

Common Name: Linden's Angurek.

Geographical Distribution: Fla. Also Cuba.

Flowering Season: February to June.

Illustration: Ames, Orchidaceae, fasc. 1, pl. 16 (as *Dendrophylax Lindenii*).

POLYSTACHYA *Hooker*

1. Polystachya luteola (*Swartz*) *Hooker*, Exotic Flora, vol. 2, pl. 103 (1824).

Synonymy:

Epidendrum minutum *Aublet*, Histoire Plantes Guiane Françoise, vol. 2, p. 824 (1775).

Dendrobium polystachyon *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 247 (1800).

Cranichis luteola *Swartz*, Flora Indiae Occidentalis, vol. 3, p. 1433 (1804?).

Dendrorchis minuta *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 658 (1891).

Polystachya minuta *Frappier* ex Cordemoy, Flore de l'Ile Réunion, p. 190, in footnote (1895) and *Britton* in Small, Flora Southeastern United States, ed. 1, p. 328 (1903).

Common Name: Pale-flowered Polystachya, Large Polystachya.

Geographical Distribution: Fla. Also Bahama Islands, West Indies, Mexico, Central and South America and Old World Tropics.

Flowering Season: August to December (in Fla.).

Illustration: Hooker, Exotic Flora, vol. 2, p. 103; Addisonia, pl. 234 (as *P. minuta*).

Note. The oldest name for the species is *Epidendrum minutum* Aublet, and although the combinations *Polystachya minuta* (Aublet) Frappier ex Cordemoy and (Aublet) Britton have been made, it seems inadvisable to use either on account of the already existing *Polystachya minuta* A. Richard & Galeotti in Annales Sciences Naturelles, ser. 3, vol. 3, p. 27 (1845). This last is presumably not a Polystachya, but its status is at present (and probably will remain) unsettled.

PONTHIEVA *R. Brown*

1. **Ponthieva Brittonae** *Ames* in Torreya, vol. 10, p. 90 (1910).

Common Name: Mrs. Britton's Ponthieva.

Geographical Distribution: Fla. Also Bahama Islands.

Flowering Season: December (in Fla.).

2. **Ponthieva racemosa** (*Walter*) *Mohr* in Contributions United States National Herbarium, vol. 6 (Plant Life Alabama), p. 460 (1901) and *Blake* in Rhodora, vol. 17, p. 136 (1915).

Synonymy:

Arethusa racemosa *Walter*, Flora Caroliniana, p. 222 (1788).

Neottia glandulosa *Sims* in Botanical Magazine, pl. 842 (1805).

Ponthieva glandulosa *R. Brown* in Aiton, Hortus Kewensis, ed. 2, vol. 5, p. 200 (1813).

Common Name: Many-flowered Ponthieva, Glandulous Neottia, Glandular Ponthieva.

Geographical Distribution: Va. (Williamsburg) to Fla. Also West Indies, and Central and South America.

Flowering Season: Late September to January.

ILLUSTRATION: Botanical Magazine, pl. 842 (as *Neottia glandulosa*); Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 4 (as *P. glandulosa*).

PRESCOTTIA *Lindley*

1. **Prescottia oligantha** (*Swartz*) *Lindley*, Genera and Species Orchidaceous Plants, p. 454 (1840).

SYNONYMY:

Cranichis oligantha *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 120 (1788).

Prescottia myosurus *Reichenbach filius* ex Grisebach, Flora British West Indian Islands, p. 640 (1864).

COMMON NAME: Small Prescottia.

GEOGRAPHICAL DISTRIBUTION: Fla. Also Bahama Islands and West Indies.

FLOWERING SEASON: February (in Fla.).

ILLUSTRATION: Fawcett & Rendle, Flora Jamaica, vol. 1, pl. 5, fig. 4.

SERAPIAS *Linnaeus*

1. **Serapias Austinae** (*A. Gray*) *A. A. Eaton* in Proceedings Biological Society Washington, vol. 21, p. 66 (1908).

SYNONYMY:

Chloraea Austinae *A. Gray* in Proceedings American Academy, vol. 12, p. 83 (December 27, 1876).

Cephalanthera oregana *Reichenbach filius* in Linnaea, vol. 41, p. 53 (December 1876).

Cephalanthera Austinae *Heller*, Catalogue North American Plants, ed. 2, p. 4 (1900).

Eburophyton Austinae *Heller* in Muhlenbergia, vol. 1, p. 49 (1904).

Common Name: Phantom Orchid, Snow Orchid.

Geographical Distribution: Idaho, Wash., Ore. and Calif.

Flowering Season: June to September.

Illustration: Abrams, Illustrated Flora Pacific States, vol. 1, p. 478, fig. 1170 (as *Eburophyton Austinae*).

SPIRANTHES *L. C. Richard*

1. **Spiranthes Beckii** *Lindley*, Genera and Species Orchidaceous Plants, p. 472 (1840), exclude synonymy.

Synonymy:

Spiranthes simplex *A. Gray*, Manual Botany Northern United States, ed. 5, p. 506 (1867), not Grisebach.

Gyrostachys simplex *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Spiranthes Grayi *Ames* in Rhodora, vol. 6, p. 44 (1904).

Gyrostachys Grayi *Britton*, Manual Flora Northern States and Canada, ed. 2, p. 300 (1905).

Ibidium Beckii *House* in Muhlenbergia, vol. 1, p. 128 (1906).

Gyrostachys Beckii *W. Stone*, Plants Southern New Jersey, p. 375 (1912).

Triorchis Grayi *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Triorchis Beckii *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Common Name: Little Ladies' Tresses.

Geographical Distribution: Mass., R. I., Conn., N. Y., N. J., Md., N. C., Ga., Fla. and Miss. west to Tex. and Ark.; Tenn. and Ky.

Flowering Season: March to August (in the south), August and September (in the north).

Illustration: Gibson, Our Native Orchids, pl. 41, fig. 2 (as *Gyrostachys simplex*).

2. Spiranthes cernua (*Linnaeus*) *L. C. Richard*, De Orchideis Europaeis Annotationes, p. 37 (1817) (in Mémoires Muséum d'Histoire Naturelle Paris, vol. 4, p. 59 (1818)).

Synonymy:

Ophrys cernua *Linnaeus*, Species Plantarum, ed. 1, vol. 2, p. 946 (1753).

Gyrostachys cernua *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Ibidium cernuum *House* in Bulletin Torrey Botanical Club, vol. 32, p. 381 (1905).

? Ibidium incurvum *Jennings* in Annals Carnegie Museum, vol. 3, p. 483, pl. 20 (1906).

Triorchis cernua *Nieuwland* in American Midland Naturalist, vol. 3, p. 122 (1913).

Common Name: Nodding Ladies' Tresses.

Geographical Distribution: N. S., Ont., New England and N. Y. south to N. C., Ga. and Ala., westward to Minn., S. Dak., Neb., Mo., Kans., Okla., Tex. and N. Mex.

Flowering Season: July to October (occasionally later).

Illustration: Botanical Register, vol. 10, pl. 823; Ames in Rhodora, vol. 23, pl. 127, figs. 1–11.

Var. ochroleuca (*Rydberg*) *Ames*, Orchidaceae, fasc. 1, p. 145 (1905).

Synonymy:

Gyrostachys ochroleuca *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 300 (1901).

Ibidium ochroleucum *House* in Bulletin Torrey Botanical Club, vol. 32, p. 381 (1905).

Triorchis ochroleuca *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Common Name: Yellow Ladies' Tresses.

Geographical Distribution: N. S., N. H. and Mass. south to N. C.; Mo. (*Palmer*).

Flowering Season: September and October.

Illustration: Ames in Rhodora, vol. 23, pl. 127, figs. 12 & 13.

3. **Spiranthes cranichoides** (*Grisebach*) *Cogniaux* in Urban, Symbolae Antillanae, vol. 6, p. 338 (1909).

Synonymy:

Pelexia cranichoides *Grisebach*, Catalogus Plantarum Cubensium, p. 269 (1866).

Spiranthes Storeri *Chapman*, Flora Southern United States, ed. 3, p. 488 (1897).

Beadlea Storeri *Small*, Flora Southeastern United States, ed. 1, p. 319 (1903).

Sauroglossum cranichoides *Ames* in Proceedings Biological Society Washington, vol. 17, p. 117 (1904).

Beadlea cranichoides *Small*, Flora Southeastern United States, ed. 2, p. 320 (1913).

Cyclopogon cranichoides *Schlechter* in Beihefte Botanischen Centralblatt, vol. 37, Abteilung II, p. 387 (1920).

Geographical Distribution: Fla. Also Cuba.

Flowering Season: December to March.

Illustration: Ames, Orchidaceae, fasc. 1, pl. 12 (as *Sauroglossum cranichoides*).

4. **Spiranthes elata** (*Swartz*) *L. C. Richard*, De Orchideis Europaeis Annotationes, p. 37 (1817) (in Mémoires Muséum d'Histoire Naturelle Paris, vol. 4, p. 59 (1818)).

Synonymy:

Satyrium elatum *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 119 (1788).

Neottia elata *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 226 (1800).

Sauroglossum Richardii *Ames*, Orchidaceae, fasc. 1, p. 44 (1905), in text.

Cyclopogon elatus *Schlechter* in Fedde, Repertorium Specierum Novarum, Beihefte, vol. 6, p. 53 (1919).

Common Name: Tall Neottia.

Geographical Distribution: Fla. (Hernando Co., *A. H. Curtiss*, in 1881). Also West Indies, Trinidad and South America.

Flowering Season: April (in Fla.).

Illustration: Botanical Magazine, pl. 2026 (as *Neottia elata*).

5. Spiranthes gracilis (*Bigelow*) *Beck*, Botany Northern and Middle States, ed. 1, p. 343 (1833).

Synonymy:

Neottia gracilis *Bigelow*, Florula Bostoniensis, ed. 2, p. 322 (1824).

Spiranthes brevilabris *Lindley*, Genera and Species Orchidaceous Plants, p. 471 (1840).

Gyrostachys gracilis *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Ibidium gracile *House* in Bulletin Torrey Botanical Club, vol. 32, p. 381 (1905).

Triorchis gracilis *Nieuwland* in American Midland Naturalist, vol. 3, p. 123 (1913).

Common Name: Slender Ladies' Tresses.

Geographical Distribution: N. S., N. B., P. E. I., Que., Ont. and Manitoba; New England and N. Y. south to Fla. and westward to Minn., Ia., Mo., Okla., La. and Tex.

Flowering Season: July to September (February to May in the south).

Illustration: Hooker, Flora Boreali-americana, vol. 2, pl. 203; Ames in Rhodora, vol. 23, pl. 129.

6. Spiranthes laciniata (*Small*) *Ames*, Orchidaceae, fasc. 1, p. 120 (1905).

Synonymy:

Gyrostachys laciniata *Small*, Flora Southeastern United States, ed. 1, p. 318 (1903).

Ibidium laciniatum *House* in Muhlenbergia, vol. 1, p. 128 (1906).

Triorchis laciniata *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Geographical Distribution: Ga., Fla., Ala., La. and Tex.

Flowering Season: May to July.

7. Spiranthes longilabris *Lindley*, Genera and Species Orchidaceous Plants, p. 467 (1840).

Synonymy:

Spiranthes brevifolia *Chapman*, Flora Southern United States, ed. 1, p. 462 (1860).

Gyrostachys brevifolia *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Gyrostachys longilabris *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Ibidium longilabris *House* in Muhlenbergia, vol. 1, p. 128 (1906).

Triorchis longilabris *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Geographical Distribution: Fla., Miss. and La.

Flowering Season: April to May, October to January.

Illustration: Ames, Orchidaceae, fasc. 2, pl. 25.

8. Spiranthes lucayana (*Britton*) *Cogniaux* in Urban, Symbolae Antillanae, vol. 6, p. 338 (1909).

Synonymy:

Ibidium lucayanum *Britton* in Bulletin New York Botanical Garden, vol. 5, p. 312 (1909).

Mesadenus lucayanus *Schlechter* in Beihefte Botanischen Centralblatt, vol. 37, Abteilung II, p. 368 (1920).

Common Name: Green Ladies' Tresses.

Geographical Distribution: Fla. Also Bahama Islands, Porto Rico and Santo Domingo.

Flowering Season: March (in Fla.).

9. Spiranthes lucida (*H. H. Eaton*) *Ames*, Orchidaceae, fasc. 2, p. 258 (1908).

Synonymy:

Neottia plantaginea *Rafinesque* in American Monthly Magazine, vol. 2, p. 206 (1818).

Spiranthes cernua γ. latifolia *Torrey*, Compendium Flora Northern and Middle States, p. 320 (1826).

Neottia lucida *H. H. Eaton* in Transylvania Journal Medicine and Associate Sciences, vol. 5, p. 107 (1832).

Spiranthes latifolia *Torrey* ex Lindley, Genera and Species Orchidaceous Plants, p. 467 (1840).

Spiranthes plantaginea *Torrey*, Flora State of New York, vol. 2, p. 284 (1843), not Lindley.

Gyrostachys latifolia *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Gyrostachys plantaginea *Britton & Brown*, Illustrated Flora Northern United States, Canada, etc., ed. 1, vol. 1, p. 470, fig. 1122 (1896), not Kuntze.

Ibidium plantagineum *House* in Bulletin Torrey Botanical Club, vol. 32, p. 381 (1905).

Triorchis plantaginea *Nieuwland* in American Midland Naturalist, vol. 3, p. 122 (1913).

Common Name: Wide-leaved Ladies' Tresses.

Geographical Distribution: Que., Ont., Me., N. H., Vt., Mass., Conn., N. Y., N. J., Pa., Del., Va., O., Mich. and Wisc.

Flowering Season: June and July.

Illustration: Britton & Brown, Illustrated Flora Northern United States, Canada, etc., ed. 1, vol. 1, fig. 1122 (as *Gyrostachys plantaginea*); House, Wild Flowers New York, pt. 1 (in Memoirs New York State Museum, vol. 15, pt. 1), pl. 42A (as *Ibidium plantagineum*).

10. Spiranthes odorata (*Nuttall*) *Lindley*, Genera and Species Orchidaceous Plants, p. 467 (1840).

Synonymy:

Neottia odorata *Nuttall* in Journal Academy Natural Sciences Philadelphia, vol. 7, p. 98 (1834).

Gyrostachys odorata *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Gyrostachys constricta *Small* in Bulletin Torrey Botanical Club, vol. 25, p. 609 (1898).

Gyrostachys triloba *Small* in Bulletin Torrey Botanical Club, vol. 25, p. 610 (1898).

Spiranthes constricta *K. Schumann* in Just, Botanisches Jahresbericht, vol. 26, pt. 1, p. 339 (1900).

Ibidium odoratum *House* in Muhlenbergia, vol. 1, p. 128 (1906).

Triorchis odorata *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Ibidium trilobum *Small*, Flora Southeastern United States, ed. 2, p. 320 (1913).

Triorchis triloba *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Common Name: Fragrant Ladies' Tresses.

Geographical Distribution: Va., Ga., Fla., Ala., La. and Tex.

Flowering Season: September to December.

Illustration: Gibson, Our Native Orchids, pl. 39, fig. 5 (as *Gyrostachys odorata*).

11. Spiranthes ovalis *Lindley*, Genera and Species Orchidaceous Plants, p. 466 (1840).

Synonymy:

Gyrostachys ovalis *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Spiranthes cernua var. parviflora *Chapman*, Flora Southern United States, ed. 3, p. 488 (1897).

Gyrostachys parviflora *Small*, Flora Southeastern United States, ed. 1, p. 318 (1903).

Spiranthes parviflora *Ames*, Orchidaceae, fasc. 1, p. 137 (1905).

Ibidium ovalis *House* in Muhlenbergia, vol. 1, p. 128 (1906).

Ibidium parviflorum *Jennings* in Annals Carnegie Museum, vol. 3, p. 485 (1906).

Triorchis ovalis *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Spiranthes Smallii *Schlechter* in Beihefte Botanischen Centralblatt, vol. 37, Abteilung II, p. 358 (1920).

Geographical Distribution: Ga., Ala., Miss., Tex., Okla., Mo. and Tenn.

Flowering Season: September and October.

12. Spiranthes porrifolia *Lindley*, Genera and Species Orchidaceous Plants, p. 467 (1840).

Synonymy:

Gyrostachys porrifolia *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Orchiastrum porrifolium *Greene*, Manual Botany Region San Francisco Bay, p. 306 (1894).

Ibidium porrifolium *Rydberg* in Bulletin Torrey Botanical Club, vol. 32, p. 610 (1905).

Common Name: Western Ladies' Tresses.

Geographical Distribution: Wash., Ore. and Calif.

Flowering Season: June to August.

Illustration: Abrams, Illustrated Flora Pacific States, vol. 1, p. 479, fig. 1172 (as *Ibidium porrifolium*).

13. Spiranthes praecox (*Walter*) *S. Watson* in A. Gray, Manual Botany Northern United States, ed. 6, p. 503 (1890), as to synonymy.

Synonymy:

Limodorum praecox *Walter*, Flora Caroliniana, p. 221 (1788).

Spiranthes tortilis *Chapman*, Flora Southern United States, ed. 1, p. 462 (1860), as to plant described, not L. C. Richard.

Spiranthes graminea var. Walteri *A. Gray*, Manual Botany Northern United States, ed. 5, p. 505 (1867), as to synonymy.

Gyrostachys praecox *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 663 (1891), exclude synonym *S. Beckii* Lindley.

Ibidium praecox *House* in Muhlenbergia, vol. 1, p. 129 (1906).

Triorchis praecox *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Common Name: Grass-leaved Ladies' Tresses.

Geographical Distribution: N. J., S. C. to Fla. and Ala. westward to Tex.

Flowering Season: March to May, rarely June (in the south), August and September (in N. J.).

Illustration: Ames in Rhodora, vol. 6, p. 30, fig. 2.

14. Spiranthes Romanzoffiana *Chamisso* in Linnaea, vol. 3, p. 32 (1828).

Synonymy:

Neottia gemmipara *Smith*, English Flora, ed. 1, vol. 4, p. 36 (1828).

Spiranthes gemmipara *Lindley*, Synopsis British Flora, ed. 1, p. 257 (1829).

Gyrostachys gemmipara *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Gyrostachys Romanzowiana *MacMillan*, Metaspermae Minnesota Valley, p. 171 (1892).

Orchiastrum Romanzoffianum *Greene*, Manual Botany Region San Francisco Bay, p. 306 (1894).

Ibidium strictum *House* in Bulletin Torrey Botanical Club, vol. 32, p. 381 (1905).

Ibidium Romanzoffianum *House* in Muhlenbergia, vol. 1, p. 129 (1906).

Spiranthes stricta *A. Nelson* in Coulter & Nelson, New Manual Botany Central Rocky Mountains, p. 125 (1909).

Ibidium Romanzoffianum var. strictum *Daniels*, Flora of Boulder Colorado, p. 96 (1911).

Triorchis Romanzoffiana *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Triorchis stricta *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

COMMON NAME: Hooded Ladies' Tresses.

GEOGRAPHICAL DISTRIBUTION: Nfd., N. S., P. E. I., N. B., Lab., Que. to B. C. and Unalaska; Me., N. H., Vt., Mass., Conn., N. Y., Mich., Wisc., Ill., Minn., S. Dak., Mont., Wyo., Colo., Utah, Nev., Idaho, Wash., Ore. and Calif. Also Ireland.

FLOWERING SEASON: July to September.

ILLUSTRATION: Botanical Magazine, pl. 5277 (as *S. cernua*).

15. Spiranthes tortilis (*Swartz*) *L. C. Richard*, De Orchideis Europaeis Annotationes, p. 37 (1817) (in Mémoires Muséum d'Histoire Naturelle Paris, vol. 4, p. 59 (1818)), exclude synonym *Neottia quadridentata.*

SYNONYMY:

Satyrium spirale *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 118 (1788), not *Ophrys spiralis* Linnaeus.

Neottia tortilis *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 226 (1800).

Ibidium tortile *House* in Muhlenbergia, vol. 1, p. 129 (1906).

Triorchis spiralis *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Spiranthes Amesiana *Schlechter* in Beihefte Botanischen Centralblatt, vol. 37, Abteilung II, p. 348 (1920).

COMMON NAME: Southern Ladies' Tresses.

GEOGRAPHICAL DISTRIBUTION: Fla. and La. Also Bermuda, Bahama Islands, West Indies and Trinidad.

FLOWERING SEASON: May (in Fla.).

ILLUSTRATION: Fawcett & Rendle, Flora Jamaica, vol. 1, pl. 3, figs. 1–5.

χ Spiranthes vernalis *Engelmann & Gray* in Boston Journal Natural History, vol. 5, p. 236 (Plantae Lindheimerianae, p. 28) (1845).

Synonymy:

Spiranthes graminea var. Walteri *A. Gray*, Manual Botany Northern United States, ed. 5, p. 505 (1867), as to plant described. 1867

Spiranthes graminea var. praecox *Britton, Sterns & Poggenberg*, Preliminary Catalogue Anthophyta and Pteridophyta New York, p. 52 (1888).

Gyrostachys vernalis *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Gyrostachys praecox *Britton & Brown*, Illustrated Flora Northern United States, Canada, etc., ed. 1, vol. 1, p. 471 (1896), in part.

Gyrostachys Reverchonii *Small* in Bulletin Torrey Botanical Club, vol. 25, p. 610 (1898).

Gyrostachys linearis *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 300 (1901).

Gyrostachys xyridifolia *Small*, Flora Southeastern United States, ed. 1, p. 318 (1903).

χ Spiranthes intermedia *Ames* in Rhodora, vol. 5, p. 262, pl. 47 (1903).

Spiranthes neglecta *Ames* in Rhodora, vol. 6, p. 30, pl. 51 and fig. 1 (1904).

Ibidium vernalis *House* in Bulletin Torrey Botanical Club, vol. 32, p. 381 (1905).

χ Ibidium intermedium *House* in Muhlenbergia, vol. 1, p. 129 (1906).

Ibidium xyridifolium *Small*, Flora Southeastern United States, ed. 2, p. 319 (1913).

Triorchis linearis *Nieuwland* in American Midland Naturalist, vol. 3, p. 123, in footnote (1913).

Triorchis vernalis *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Triorchis xyridifolia *House* in American Midland Naturalist, vol. 6, p. 206 (1920).

Spiranthes cernua χ gracilis *Ames* in Rhodora, vol. 23, p. 80, pl. 128 (1921).

Common Name: Linear-leaved Ladies' Tresses.

Geographical Distribution: Mass. to Fla. along the coast, west to Tex. and N. Mex.; Okla., Ark., Mo., Kans. and Ill.

Flowering Season: January to June (in Fla. and Tex.), July (in Va. and Okla.), July and August (in N. J.), August and September (in New England, N. Y., Kans. and Mo.).

Illustration: Ames in Rhodora, vol. 5, pl. 47 (as χ *S. intermedia*); vol. 6, pl. 51 and fig. 1 (as *S. neglecta*) and vol. 23, pl. 128 (as *S. cernua* χ *gracilis*).

STENORRHYNCHUS *L. C. Richard*

1. **Stenorrhynchus cinnabarinus** (*La Llave & Lexarza*) *Lindley*, Genera and Species Orchidaceous Plants, p. 479 (1840).

Synonymy:

Neottia cinnabarina *La Llave & Lexarza*, Novorum Vegetabilium Descriptiones, fasc. 2, Orchidianum Opusculum, p. 3 (1825).

Spiranthes cinnabarinus *Hemsley* in Godman & Salvin, Biologia Centrali-americana, Botany, vol. 3, p. 300 (1884).

Gyrostachys cinnabarina *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Geographical Distribution: Western Tex. (Chios Mts., *Havard*). Also Mexico and Guatemala.

Flowering Season: August (in Tex.).

2. **Stenorrhynchus orchioides** (*Swartz*) *L. C. Richard*, De Orchideis Europaeis Annotationes, p. 37 (1817) (in Mémoires Muséum d'Histoire Naturelle Paris, vol. 4, p. 59 (1818)).

Synonymy:

Satyrium orchioides *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 118 (1788).

Neottia squamulosa *Humboldt*, *Bonpland & Kunth*, Nova Genera et Species, vol. 1, p. 332, pl. 71 (1816).

Stenorrhynchus squamulosus *Sprengel*, Systema Vegetabilium, vol. 3, p. 710 (1826) and *Fawcett & Rendle*, Flora Jamaica, vol. 1, p. 24 (1910).

Spiranthes jaliscana *S. Watson* in Proceedings American Academy, vol. 26, p. 153 (1891).

Gyrostachys orchiodes *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 664 (1891).

Stenorrhynchus jaliscanus *Nash* in Bulletin Torrey Botanical Club, vol. 22, p. 158 (1895).

Common Name: Leafless Beaked Orchid, Frosted-flowered Neottia.

Geographical Distribution: Fla. Also Bahama Islands, West Indies, Mexico, and Central and South America.

Flowering Season: May (in Fla.), January to June (in West Indies).

Illustration: Botanical Register, vol. 9, pl. 701; Botanical Magazine, pl. 1036 (both as *Neottia orchioides*).

TIPULARIA *Lindley*

1. Tipularia discolor (*Pursh*) *Nuttall*, Genera North American Plants, vol. 2, p. 195 (1818).

Synonymy:

Limodorum unifolium *Muhlenberg*, Catalogus Plantarum Americae Septentrionalis, p. 81 (1813), *nomen*.

Orchis discolor *Pursh*, Flora Americae Septentrionalis, vol. 2, p. 586 (1814).

Tipularia unifolia *Britton*, *Sterns & Poggenberg*, Preliminary Catalogue Anthophyta and Pteridophyta New York, p. 51 (1888).

Common Name: Crane-fly Orchis.

Geographical Distribution: N. J., Del., Md., D. C. south to Fla., Ala. and La., O. (Jefferson Co.) and Ind.

Flowering Season: July to September.

Illustration: Gibson, Our Native Orchids, pl. 55; Jennings, Torreya, vol. 12, fig. 1.

TRIPHORA *Nuttall*

1. Triphora cubensis (*Reichenbach filius*) *Ames*, Schedulae Orchidianae, No. 7, p. 35 (1924).

Synonymy: Pogonia cubensis *Reichenbach filius* in Nederlandsch Kruidkundig Archief, vol. 4, p. 322 (1858) (by typographical error as *rubensis*).

Geographical Distribution: Fla. (Pineland, Little River). Also Cuba.

Flowering Season: July (in Fla.).

2. Triphora trianthophora (*Swartz*) *Rydberg* in Britton, Manual Flora Northern States and Canada, ed. 1, p. 298 (1901).

Synonymy:

? Arethusa foliosa *Walter*, Flora Caroliniana, p. 223 (1788). (Cf. Note.)

Arethusa trianthophoros *Swartz* in Kongliga Svenska Vetenskaps Academiens Nya Handlingar, vol. 21, p. 230 (1800).

Arethusa parviflora *Michaux*, Flora Boreali-americana, vol. 2, p. 160 (1803).

Arethusa pendula *Muhlenberg* ex Willdenow, Species Plantarum, vol. 4, p. 82 (1805).

Triphora pendula *Nuttall*, Genera North American Plants, vol. 2, p. 193 (1818).

Pogonia pendula *Lindley* in Botanical Register, vol. 11, pl. 908 (1825).

Pogonia trianthophorus *Britton*, *Sterns & Poggenberg*, Preliminary Catalogue Anthophyta and Pteridophyta New York, p. 52 (1888).

COMMON NAME: Pendulous Pogonia, Nodding Pogonia, Three Birds.

GEOGRAPHICAL DISTRIBUTION: Canada (old record); Me., N. H., Vt., Conn., N. Y. and Pa. south to S. C. and Fla., Ala.; Tenn., Ill., Mich., Wisc. and Mo.

FLOWERING SEASON: August and September.

ILLUSTRATION: Ames, Orchidaceae, fasc. 7, pls. 102 & 103; Botanical Register, vol. 11, pl. 908 (as *Pogonia pendula*).

Note. Arethusa foliosa Walter may be an older name for this species. Walter's description is inadequate for sure determination and no specimen is extant in the Walter Herbarium.

TROPIDIA *Blume*

1. Tropidia polystachya (*Swartz*) *Ames*, Orchidaceae, fasc. 2, p. 262 (1908).

SYNONYMY:

Serapias polystachya *Swartz*, Prodromus Vegetabilium Indiam Occidentalem, p. 119 (1788).

Chloidia vernalis *Lindley*, Genera and Species Orchidaceous Plants, p. 484 (1840).

Corymborchis polystachya *Kuntze*, Revisio Generum Plantarum, pt. 2, p. 658 (1891).

Tropidia Eatonii *Ames*, Contribution to Knowledge Orchid Flora Southern Florida, p. 14, pl. 5 (1904).

GEOGRAPHICAL DISTRIBUTION: Fla. Also Cuba, Jamaica and Santo Domingo.

FLOWERING SEASON: December to February (in Fla.).

ILLUSTRATION: Ames, Contribution to Knowledge Orchid Flora Southern Florida, pl. 5 (as *T. Eatonii*).

VANILLA *Swartz*

1. **Vanilla articulata** *Northrop* in Memoirs Torrey Botanical Club, vol. 12, p. 31, pl. 3 (1902).

Common Name: Link-vine, Worm-vine, Wormwood.

Geographical Distribution: Fla. Also Bahama Islands and Cuba.

Flowering Season: July.

Illustration: Memoirs Torrey Botanical Club, vol. 12, pl. 3.

2. **Vanilla Eggersii** *Rolfe* in Journal Linnean Society, vol. 32, p. 472 (1896).

Common Name: Eggers' Vanilla.

Geographical Distribution: Fla. Also Bahama Islands and West Indies.

3. **Vanilla fragrans** (*Salisbury*) *Ames*, Schedulae Orchidianae, No. 7, p. 36 (1924).

Synonymy:

Myrobroma fragrans *Salisbury*, Paradisus Londinensis, pl. 82 (1807), exclude synonymy.

Vanilla planifolia *Andrews*, Botanical Repository, vol. 8, pl. 538 (1808).

Common Name: Vanilla.

Geographical Distribution: Fla. Also West Indies, and Central and South America.

Illustration: Botanical Magazine, pl. 7167 (as *V. planifolia*).

Note. A non-persistent waif in Florida.

4. **Vanilla phaeantha** *Reichenbach filius* in Flora, vol. 48, p. 274 (1865).

Common Name: Oblong-leaved Vanilla.

Geographical Distribution: Fla. Also Bahama Islands and West Indies.

Flowering Season: April and May.

Illustration: Fawcett & Rendle, Flora Jamaica, vol. 1, pl. 2, fig. 20.

INDEX

INDEX

The entries in roman type are the names of valid genera and species. The entries in italic type are those of synonyms.

ACHROANTHES Raf.
corymbosa Greene, 77
floridana Greene, 80
monophylla Greene, 79
montana Greene, 79
porphyrea Woot. & Standl., 78
purpurea Greene, 78
unifolia Raf., 81

AËRANTHUS Reichb. f.
Lindenii Reichb. f., 86
pachyrrhizus Reichb. f., 19
porrectus Reichb. f., 67

AMESIA *A. Nels. & Macbr.*, 13
gigantea (*Dougl.*) *A. Nels. & Macbr.*, 13
latifolia (*Huds.*) *A. Nels. & Macbr.*, 13

ANACHEILIUM Hoffmsgg.
cochleatum Small, not Hoffmsgg., 33

ANGRAECUM *Bory*
Lindenii Lindl., 86

APLECTRUM (*Nutt.*) *Torr.*, 14
hyemale (*Muhl.*) *Torr.*, 14
var. pallidum (*House*) *Barnhart*, 15
Shortii Rydb., 14
spicatum BSP., 14
var. *pallidum* House, 15

ARETHUSA [*Gronov.*] *Linn.*, 15
bulbosa *Linn.*, 15
forma albiflora *Rand & Redf.*, 15
forma subcaerulea *Rand & Redf.*, 15
divaricata Linn., 20
foliosa Walt., 102, 103
medeoloides Pursh, 70
ophioglossoides Linn., 85
parviflora Michx., 102
pendula Muhl., 102
racemosa Walt., 87
spicata Walt., 68
trianthophoros Sw., 102
verticillata Muhl., 70

AULIZA Salisb.
difformis Small, 33
nocturna Small, 34

BASIPHYLLAEA *Schltr.*, 15
corallicola (*Small*) *Ames*, 15

BEADLEA Small
cranichoides Small, 91
Storeri Small, 91

BIFOLIUM Petiver
auriculatum Nieuwl., 74
australe Nieuwl., 74
convallarioides Nieuwl., 75
cordatum Nieuwl., 76
Smallii Nieuwl., 77

BLEPHARIGLOTTIS Raf.
alba House, 42
albiflora Raf., 41
blephariglottis Rydb., 42
var. *holopetala* Rydb., 42
Canbyi W. Stone, 43
Chapmanii Small, 43
ciliaris Rydb., 44
conspicua Small, 42
cristata Raf., 45
flaviflora Raf., 44
grandiflora Rydb., 51
lacera Farwell, 56
lacera Rydb., 56
leucophaea Farwell, 57
leucophaea Rydb., 57
peramoena Rydb., 61

psychodes Rydb., 62
var. *grandiflora* Schaffner, 51

BLETIA Ruiz & Pav.
acutipetala Hook., 71
alta Hitchc., 71
aphylla Nutt., 68
purpurea DC., 71
verecunda R. Br., 71
verecunda Chapm., not R. Br., 40

BRASSIA *Lindl.*, 16
caudata (*Linn.*) *Lindl.*, 16

CALCEOLUS Adans.
candidus Nieuwl., 27
hirsutus Nieuwl., 29
parviflorus Nieuwl., 28
reginae Nieuwl., 31

CALOPOGON *R. B.*, 16
barbatus (*Walt.*) *Ames*, 16
multiflorus *Lindl.*, 16
pallidus *Chapm.*, 17
parviflorus Lindl., 16
pulchellus (*Salisb.*) *R. Br.*, 17
forma albiflorus (*Britton*) *Fernald*, 18
forma latifolius *St. John*, 18
var. Simpsonii (*Small*) *Ames*, 18
tuberosus BSP., 17
forma *albiflorus* Britton, 18

CALYPSO *Salisb.*, 18
borealis Salisb., 19
bulbosa (*Linn.*) *Oakes*, 18
forma occidentalis *Holzing.*, 19
occidentalis Heller, 19

CAMPYLOCENTRUM
Benth., 19
pachyrrhizum (*Reichb. f.*) *Rolfe*, 19
porrectum Rolfe, 67

CARTERIA Small
corallicola Small, 15

CATHEA Salisb.
tuberosa Morong, 17

CENTROGENIUM *Schltr.*, 20
setaceum (*Lindl.*) *Schltr.*, 20

CEPHALANTHERA L. C. Rich.
Austinae Heller, 88
oregana Reichb. f., 88

CHLOIDIA Lindl.
vernalis Lindl., 103

CHLORAEA *Lindl.*
Austinae A. Gray, 88

CLADORHIZA Raf.
maculata Raf., 21

CLEISTES *L. C. Rich.*, 20
divaricata (*Linn.*) *Ames*, 20

COELOGLOSSUM Hartm.
bracteatum Parl., 67

COELOGYNE *Lindl.*
triptera Brongn., 69

CORALLORRHIZA [*Haller*] *R. Br.*, 21
arizonica S. Wats., 68
Bigelovii S. Wats., 23
Corallorrhiza Karst., 24
var. *coloradensis* Cockerell, 24
Corallorrhiza MacMillan, 24
Grabhamii Cockerell, 22
innata R. Br., 24
var. virescens *Farr*, 24
Leimbachiana Suksd., 22
Macraei A. Gray, 23
maculata *Raf.*, 21
var. flavida *H. H. Bartlett*, 21
var. flavida *Cockerell*, 21
var. *fusca* H. H. Bartlett, 21
var. intermedia *Farwell*, 21
var. occidentalis (*Lindl.*) *Cockerell*, 22
var. punicea *H. H. Bartlett*, 22
Mertensiana *Bong.*, 22
micrantha Chapm., 23

multiflora Nutt., 21
var. *flavida* Peck, 21
β. *occidentalis* Lindl., 22
var. *sulphurea* Suksd., 22
ochroleuca Rydb., 23
odontorhiza Chapm., not Nutt., 24
odontorhiza (*Willd.*) *Nutt.*, 22
striata *Lindl.*, 23
trifida *Chatelain*, 23
Vancouveriana Finet, 24
verna Nutt., 24
Vreelandii Rydb., 23
Wisteriana *Conrad*, 24
CORYMBORCHIS *Thou.*
polystachya Ktze., 103
CRANICHIS *Sw.*, 25
luteola Sw., 86
muscosa *Sw.*, 25
oligantha Sw., 88
CRIOSANTHES Raf.
arietina House, 26
CYCLOPOGON Presl
cranichoides Schltr., 91
elatus Schltr., 92
CYMBIDIUM *Sw.*
boreale Sw., 19
hyemale Muhl., 14
odontorhizon Willd., 22
CYPRIPEDIUM *Linn.*, 25
acaule *Ait.*, 25
forma albiflorum *Rand & Redf.*, 26
var. *album* Ballif, 26
album Ait., 31
arietinum *R. Br.*, 26
bifidum Raf., 28
bulbosum Linn., 19
bulbosum *Mill.*, vii, 30
bulbosum Mill., according to Farwell, 29
var. *flavescens* Farwell, 29
var. *parviflorum* Farwell, 28
Calceolus Linn., in part, 29
californicum *A. Gray*, 26
canadensis Michx., 31
candidum *Muhl.*, 27
fasciculatum *Kellogg*, 27
var. *pusillum* Hook. f., 27
flavescens DC., 29
guttatum *Sw.*, 28
hirsutum *Mill.*, vii
hirsutum Mill., according to Farwell, 25
hirsutum Mill., according to Fox, 29
hirsutum Mill., according to House, 31
forma *album* R. Hoffm., 31
hirsutum Mill., according to Morong, 29
var. *parviflorum* Rolfe, 28
humile Salisb., 25
Knightae A. Nels., 27
luteum Raf., 28
Makasin Farwell, 30
montanum *Dougl.*, 28
occidentale S. Wats., 28
parviflorum *Salisb.*, 28
var. pubescens (*Willd.*) *Knight*, 29
parviflorum Sims, not Salisb., 29
passerinum *Richards*, 30
pubescens Willd., 29
var. *Makasin* Farwell, 29
pusillum Rolfe, 27
reginae *Walt.*, 30
var. *album* Rolfe, 31
spectabile Salisb., 31
veganum Cockerell & Barker, 29
Yatabeanum Mak., 28
CYRTOPERA Lindl.
longifolia Reichb. f., 39
Woodfordii Lindl., 39
CYRTOPODIUM *R. Br.*, 31
ecristatum Fernald, 40
punctatum (*Linn.*) *Lindl.*, 31
var. *Saintlegerianum* Stein, 32

Saintlegerianum Reichb. f., 32
Woodfordii Chapm., not Sims, 40
Woodfordii Sims, 39

CYTHEREA Salisb.
bulbosa House, 19

DENDROBIUM *Sw.*
longifolium HBK., 39
polystachyon Sw., 86

DENDROPHYLAX *Reichb. f.*
Lindenii Benth., 86

DENDRORCHIS Thou.
minuta Ktze., 86

EBUROPHYTON Heller
Austinae Heller, 88

ENCYCLIA Hook.
tampense Small, 35
tampensis Schltr., 35

EPICLADIUM Small
Boothianum Small, 32

EPIDENDRUM *Linn.*, 32
anceps *Jacq.*, 32
Boothianum *Lindl.*, 32
carthagenense Jacq., 81
caudatum Linn., 16
cochleatum *Linn.*
var. triandrum *Ames*, 33
conopseum *R. Br.*, 33
difforme *Jacq.*, 33
erythronioides Small, 32
fuscatum Sm., 32
minutum Aubl., 86
nocturnum *Jacq.*, 34
punctatum Linn., 31
pygmaeum Hook., 68
rigidum *Jacq.*, 34
strobiliferum *Reichb. f.*, 34
tampense *Lindl.*, 35
triandrum House, 33
umbellatum Sw., 33
undulatum Sw., 81, 82
utricularioides Sw., 69
variegatum Sw., 83

EPIPACTIS [*Haller*] *Boehmer*, 35
americana Lindl., 13
convallarioides Sw., 75
decipiens (*Hook.*) *Ames*, 35
gigantea Dougl., 13
Helleborine S. Wats. & Coult., 14
var. *viridens* A. Gray, 13
latifolia All., 13
pubescens (*Willd.*) *A. A. Eat.*, 36
repens (*Linn.*) *Crantz*, 37
var. ophioides (*Fernald*) *A. A. Eat.*, 37
tesselata (*Lodd.*) *A. A. Eat.*, 38
viridiflora *Reichb.*, 14
Willdenovii House, 36

ERYTHRODES *Bl.*, 38
querceticola (*Lindl.*) *Ames*, 38

EULOPHIA *R. Br.*, 39
alta (*Linn.*) *Fawc. & Rendle*, 39
ecristata (*Fernald*) *Ames*, 40
longifolia Schltr., 39
Woodfordii Rolfe, 39

FIMBRIELLA Farwell
lacera Farwell, 56
leucophaea Farwell, 57

FISSIPES Small
acaulis Small, 25
hirsuta Farwell, 25

GALEORCHIS Rydb.
spectabilis Rydb., 84

GOODYERA R. Br.
decipiens Hubb., 36
Menziesii Lindl., 35
pubescens R. Br., 36
β. *minor* Sims, 38
quercicola Chapm., 38
repens R. Br., 37
var. *ophioides* Fernald, 37
tesselata Lodd., 38

GYMNADENIA R. Br.
conica Lindl., 59
hyperborea Link, 54
longispica Durand, 49
nivea Lindl., 59
tridentata Lindl., 44
β. *clavellata* Wood, 44
GYMNADENIOPSIS Rydb.
clavellata Rydb., 45
integra Rydb., 56
nivea Rydb., 59
GYROSTACHYS Pers.
Beckii W. Stone, 89
brevifolia Ktze., 93
cernua Ktze., 90
cinnabarina Ktze., 100
constricta Small, 95
gemmipara Ktze., 97
gracilis Ktze., 92
Grayi Britton, 89
laciniata Small, 93
latifolia Ktze., 94
linearis Rydb., 99
longilabris Ktze., 93
ochroleuca Rydb., 90
odorata Ktze., 95
orchiodes Ktze., 101
ovalis Ktze., 95
parviflora Small, 96
plantaginea Britt. & Br., 94
porrifolia Ktze., 96
praecox Britt. & Br., 99
praecox Ktze., 97
Reverchonii Small, 99
Romanzowiana MacMillan, 97
simplex Ktze., 89
triloba Small, 95
vernalis Ktze., 99
xyridifolia Small, 99
HABENARIA *Willd.*, 40
aggregata Howell, 65
Andrewsii *White*, 40
behringiana (*Rydb.*) *Ames*, 40
blephariglottis (*Willd.*) *Hook.*, 41
var. conspicua (*Nash*) *Ames*, 42
var. *holopetala* A. Gray, 41
blephariglottis χ *cristata*, 43
borealis Cham., 45
var. *albiflora* Cham., 45
var. *viridiflora* Cham., 54
bracteata R. Br., 66
brevifolia *Greene*, 42
Canbyi *Ames*, 43
Chapmanii (*Small*) *Ames*, 43
Chorisiana *Cham.*, 43
ciliaris (*Linn.*) *R. Br.*, 43
var. *alba* Morong, 41
var. *holopetala* Morong, 42
ciliaris χ *cristata*, 43
clavellata (*Michx.*) *Spreng.*, 44
conspicua Nash, 42
Cooperi S. Wats., 65
cristata (*Michx.*) *R. Br.*, 45
dilatata (*Pursh*) *Hook.*, 45
var. leucostachys (*Lindl.*) *Ames*, 47
var. media (*Rydb.*) *Ames*, 48
dilatatiformis Rydb., 46, 64
distans *Griseb.*, 49
elegans (*Lindl.*) *Bol.*, 49
var. maritima (*Greene*) *Ames*, 50
elegans *Jepson*, 49
var. *elata* Jepson, 50
fimbriata (*Dryand.*) *R. Br.*, 50
forma albiflora *Rand & Redf.*, 51
flagellans S. Wats., 47
flava (*Linn.*) *R. Br.*, 52
var. *virescens* Fernald, 53
foetida S. Wats., 65
fragrans Niles, 47
fuscescens Torr., 52
Garberi Porter, 60
gracilis S. Wats., 64
graminifolia Henry, 47

grandiflora Torr., 51
Habenaria Small, 58
herbiola R. Br., 52
holopetala Niles, 42
Hookeri *Torr.*, 53
var. *oblongifolia* A. Gray, 53
Hookeriana Torr., 53
huronensis Spreng., 54
hyperborea (*Linn.*) *R. Br.*, 54
var. *huronensis* Farwell, 55
var. *leucostachys* Kränzl., 48
var. *media* Farwell, 55
var. purpurascens (*Rydb.*) *Ames*, 55
integra (*Nutt.*) *Spreng.*, 56
lacera (*Michx.*) *Lodd.*, 56
var. *elongata* Peck, 56
laxiflora S. B. Parish, 65
leptoceratitis Henry, 48
leucophaea (*Nutt.*) *A. Gray*, 57
leucostachys S. Wats., 47
var. *virida* Jepson, 48
limosa (*Lindl.*) *Hemsl.*, 58
longispicata S. B. Parish, 50
macroceras Spreng., 58
macroceratitis *Willd.*, 58
macrophylla *Goldie*, 58
maritima Greene, 50
media Niles, 48
Menziesii Macoun, 61
Michaelii Greene, 49
Michauxii Nutt., 63
multiflora Blankenship, 50
nivea (*Nutt.*) *Spreng.*, 59
Nuttallii Small, 63
oblongifolia Niles, 54
obtusata (*Pursh*) *Richards.*, 59
odontopetala *Reichb. f.*, 60
orbiculata Goldie, not (Pursh) Torr., 53
orbiculata (*Pursh*) *Torr.*, 60
var. *longifolia* Clute, 61
pedicellata S. Wats., 47
peramoena *A. Gray*, 61
psychodes × *lacera* Andrews, 40
psycodes (*Linn.*) *Spreng.*, 62
psycodes (*Linn.*) *Sw.*, 62
var. *ecalcarata* Bryan, 62
var. *grandiflora* A. Gray, 51
var. *varians* Bryan, 62
quinqueseta (*Michx.*) *Sw.*, 62
repens *Nutt.*, 63
rotundifolia Richards., 83
saccata *Greene*, 63
Schischmareffiana Cham., 65
Simpsonii Small, 63
sparsiflora *S. Wats.*, 64
spectabilis Spreng., 84
stricta Rydb., 64
Thurberi A. Gray, 58
tridentata Hook., 44
unalascensis (*Spreng.*) *S. Wats.*, 65
virescens Spreng., 52
viridis (*Linn.*) *R. Br.*
var. bracteata (*Muhl.*) *A. Gray*, 66

HABENELLA Small
Garberi Small, 60
HAMMARBYA Ktze.
paludosa Ktze., 79
HARRISELLA *Fawc. & Rendle*, 67
Amesiana Cogn., 67
porrecta (*Reichb. f.*) *Cogn.*, 67
porrecta (*Reichb. f.*) *Fawc. & Rendle*, 67
Helleborine Americana; etc. Martyn, 72
HELLEBORINE, according to Druce
gigantea Druce, 13
latifolia Druce, 14
HERMINIUM *Linn.*
unalaschcense Reichb. f., 65
HEXALECTRIS *Raf.*, 68
aphylla Raf., 68

spicata (*Walt.*) *Barnhart*, 68
squamosa Raf., 68
HORMIDIUM *Lindl.*, 68
pygmaeum (*Hook.*) *Benth. & Hook. f.*, 68
triptерum Cogn., 69
HUMBOLDTIA Ruiz & Pav.
gelida Ktze., 84
IBIDIUM Salisb.
Beckii House, 89
cernuum House, 90
gracile House, 92
incurvum Jennings, 90
intermedium House, 99
laciniatum House, 93
longilabris House, 93
lucayanum Britton, 93
ochroleucum House, 90
odoratum House, 95
ovalis House, 96
parviflorum Jennings, 96
plantagineum House, 94
porrifolium Rydb., 96
praecox House, 97
Romanzoffianum House, 97
var. *strictum* Daniels, 98
strictum House, 97
tortile House, 98
trilobum Small, 95
vernalis House, 99
xyridifolium Small, 99
IONOPSIS *R. Br.*, 69
tenera Lindl., 69
utricularioides (*Sw.*) *Lindl.*, 69
ISOTRIA *Raf.*, 70
affinis (*Aust.*) *Rydb.*, 70
medeoloides Raf., 70
verticillata (*Muhl.*) *Raf.*, 70
LEPTORCHIS Thou.
elata Ktze., 72
liliifolia Ktze., 72
Loeselii MacMillan, 73
LIMNORCHIS Rydb.
aggregata Frye & Rigg, 65
arizonica Rydb., 58
behringiana Rydb., 40
borealis Rydb., 46
brachypetala Rydb., 55, 64
brevifolia Rydb., 43
convallariaefolia Rydb., 47
dilatata Rydb., 46
var. *linearifolia* Rydb., 46
dilatatiformis Rydb., 46
ensifolia Rydb., 64
foliosa Rydb., 46
fragrans Rydb., 46
gracilis Rydb., 46, 64
graminifolia Rydb., 46
huronensis Rydb., 55
hyperborea Rydb., 55
laxiflora Rydb., 64
leptoceratitis Rydb., 47, 48
leucostachys Rydb., 48
var. *robusta* Rydb., 48
major Rydb., 55
media Rydb., 48, 55
purpurascens Rydb., 55
sparsiflora Rydb., 65
stricta Rydb., 64
Thurberi Rydb., 48
viridiflora Rydb., 55
LIMODORUM *Linn.*, 71
altum Linn., 39
graminifolium Small, 16
multiflorum Mohr, 17
pallidum Mohr, 17
parviflorum Nash, 16
pinetorum Small, 17
praecox Walt., 96
pulchellum Salisb., 17
purpureum Lam., 71
Simpsonii Small, 18
trifidum Michx., 71
tuberosum *Linn.*, 17, 71
var. *nanum* Nieuwl., 17
unifolium Muhl., 101
verecundum Salisb., 71
LIPARIS *L. C. Rich.*, 72
Correana Spreng., 73
elata *Lindl.*, 72
var. *latifolia* Ridl., 72

liliifolia (*Linn.*) *Rich.*, 72
Loeselii (*Linn.*) *L. C. Rich.*, 73

LISTERA *R. Br.*, 73
auriculata *Wiegand*, 73
australis *Lindl.*, 74
borealis *Morong*, 74
caurina *Piper*, 75
convallarioides (*Sw.*) *Nutt.*, 75
convallarioides *Torr.*, 75
cordata (*Linn.*) *R. Br.*, 76
Eschscholziana Cham., 75
nephrophylla Rydb., 76
reniformis *Small*, 76
retusa Suksd., 75
Smallii Wiegand, 76

LYSIAS Salisb.
Hookeriana Rydb., 54
macrophylla House, 59
orbiculata Rydb., 59, 61

LYSIELLA Rydb.
obtusata Rydb., 60

MACRADENIA *R. Br.*, 77
lutescens *R. Br.*, 77

MALAXIS *Sw.*, 77
Correana Barton, 73
corymbosa (*S. Wats.*) *Ktze.*, 77
diphyllos Cham., 78
Ehrenbergii (*Reichb. f.*) *Ktze.*, 78
floridana Ktze., 80
liliifolia Sw., 73
longifolia Barton, 73
monophyllos (*Linn.*) *Sw.*, 78
montana (*Engelm.*) *Ktze.*, 79
ophioglossoides Muhl., 81
paludosa (*Linn.*) *Sw.*, 79
porphyrea Ktze., 78
purpurea Ktze., 78
spicata *Sw.*, 80
tenuis (*S. Wats.*) *Ames*, 80
unifolia *Michx.*, 81

MESADENUS Schltr.
lucayanus Schltr., 93

MESICERA Raf.
Michauxii Raf., 63

MICROSTYLIS (Nutt.) Lindl.
corymbosa S. Wats., 77
diphyllos Lindl., 78
Ehrenbergii Reichb. f., 78
floridana Chapm., 80
monophyllos Lindl., 78
montana Engelm., 79
ophioglossoides Nutt., 81
porphyrea Ridl., 78
purpurea S. Wats., 78
spicata Lindl., 80
tenuis S. Wats., 80
unifolia BSP., 81

MONTOLIVAEA Reichb. f.
elegans Rydb., 49
unalaschensis Rydb., 66

MYROBROMA Salisb.
fragrans Salisb., 104

NEMURANTHES Raf.
Habenaria Raf., 58

NEOTTIA *Linn.*
calcarata Hook., not Sw., 20
cinnabarina La Llave & Lex., 100
elata Sw., 91
gemmipara Sm., 97
glandulosa Sims, 87
gracilis Bigel., 92
lucida H. H. Eat., 94
odorata Nutt., 95
orchioides Sw., 101
plantaginea Raf., 94
pubescens Willd., 36
quadridentata Willd., 98
squamulosa HBK., 101
tortilis Sw., 98

ODONECTIS Raf.
affinis Schltr., 70
verticillata Schltr., 70

ONCIDIUM *Sw.*, 81
carthaginense (*Jacq.*) *Sw.*, 81
floridanum *Ames*, 82
guttatum Reichb. f., 82

luridum *Lindl.*, 82
var. *guttatum* Lindl., 82
maculatum Urb., not Lindl., 82
sphacelatum Ames, not Lindl., 82
sylvestre Lindl., 83
undulatum *Lindl.*, 82
undulatum Salisb., 81
variegatum *Sw.*, 83
velutinum Lindl., 83

OPHRYS *Linn.*
auriculata House, 73
australis House, 74
barbata Walt., 16
borealis Rydb., 74
caurina Rydb., 75
cernua Linn., 90
convallarioides Wight, 75
Corallorhiza Linn., 24
cordata Linn., 76
liliifolia Linn., 72
Loeselii Linn., 73
monophyllos Linn., 78
nephrophylla Rydb., 76
paludosa Linn., 79
Smallii House, 76
spiralis Linn., 98
trifolia Walt., 72

ORCHIASTRUM Mich.
florrifolium Greene, 96
Romanzoffianum Greene, 97

ORCHIODES Ktze.
decipiens Ktze., 35
Menziesii Ktze., 35
pubescens Ktze., 36
repens Ktze., 37
tessellatum Ktze., 38

ORCHIS *Linn.*, 83
aristata *Fischer*, 83
bidentata Ell., 52
blephariglottis Willd., 41
bracteata Muhl., 66
ciliaris Linn., 44
clavellata Michx., 44
β. *tridentata* Muhl., 44
cristata Michx., 45
dilatata Pursh, 45
discolor Pursh, 101
fimbriata Dryand., 51
flava Linn., 52
var. *virescens* Green, 52
fuscescens Pursh, 52
grandiflora Bigel., 51
Habenaria Elmgren, 58
Habenaria Linn., 58
herbiola Pursh, 52
Hookeri Wood, 54
humilis Michx., 84
huronensis Nutt., 54
hyperborea Linn., 54
var. *dilatata* Oakes, 46
β. *huronensis* Wood, 54
integra Nutt., 56
lacera Michx., 56
leucophaea Nutt., 57
Michauxii Wood, 63
nivea Nutt., 59
obtusata Pursh, 59
orbiculata Pursh, 60
psycodes Linn., 62
quinqueseta Michx., 62
repens Raf., 63
repens Wood, 63
rotundifolia *Banks*, 83
scutellata Nutt., 52
spectabilis *Linn.*, 84
var. *lilacina* Ames, 84
tridentata Muhl., 44
virescens Muhl., 52
viridis Pursh, 66

PELEXIA *Poit.*
cranichoides Griseb., 91
setacea Lindl., 20

PERAMIUM Salisb.
decipiens Piper, 35
giganteum Coult., 13
Menziesii Morong, 35
ophioides Rydb., 37
pubescens C. C. Curtis, 36
pubescens Salisb., according to MacMillan, 36

repens Salisb., 37
var. *ophioides* Heller, 37
tesselatum Heller, 38
PERISTYLUS Bl.
bracteatus Lindl., 66
Chorisianus Lindl., 43
clavellatus Kränzl., 44
niveus Kränzl., 59
virescens Lindl., 52
PERULARIA Lindl.
bidentata Small, 53
flava Farwell, 53
scutellata Small, 53
virescens A. Gray, 52
PHYSURUS L. C. Rich.
querceticola Lindl., 38
Sagraeanus A. Rich., 38
PIPERIA Rydb.
Cooperi Rydb., 66
elegans Rydb., 49
elongata Rydb., 49
lancifolia Rydb., 49, 66
leptopetala Rydb., 49
longispica Rydb., 50
maritima Rydb., 50
Michaelii Rydb., 50
multiflora Rydb., 49
transversa Suksd.
=Habenaria elegans (*Lindl.*) *Bol.*
unalaschensis Rydb., 66
PLATANTHERA L. C. Rich.
Bigelovii Wood, 51
blephariglottis Lindl., 41
var. *holopetala* Torr., 41
borealis Reichb. f., 46
bracteata Torr., 66
brevifolia Kränzl., 42
Chorisiana Reichb. f., 43
ciliaris Lindl., 44
var. *blephariglottis* Chapm., 41
convallariaefolia Reichb. f., not Lindl., 46
cristata Lindl., 45
dilatata Lindl., 45
dolichorhiza Reichb. f., 55
elegans Lindl., 49
fimbriata Lindl., 51
a. *grandiflora* Hook., 51
flava Lindl., 52
foetida Geyer, 65
fuscescens Kränzl., 52
Garberi Chapm., 60
gracilis Lindl., 64
graminea Lindl., 46
grandiflora Lindl., 51
herbiola Lindl., 52
holopetala Lindl., 41
Hookeri Lindl., 53.
var. *oblongifolia* Paine, 53
huronensis Lindl., 54
hyperborea Lindl., 54
var. *convallariaefolia* Kränzl., 46
var. *dilatata* Reichb. f., 46
1. *genuina* Reichb. f., 55
var. *graminea* Reichb. f., 46
var. *leucostachys* Kränzl., 48
incisa Lindl., 51
integra Gray, 56
lacera D. Don, 56
leucophaea Lindl., 57
leucostachys Lindl., 47
limosa Lindl., 58
Menziesii Lindl., 61
Michauxii Wood, 63
obtusata Lindl., 60
orbiculata Lindl., 61
peramoena A. Gray, 61
psychodes Lindl., 56, 62
var. *grandiflora* Torr., 51
repens Wood, 63
rotundifolia Lindl., 83
Schischmareffiana Lindl., 65
stricta Lindl., 64
unalaschcensis Kurtz, 66
viridis Lindl.
var. *bracteata* Reichb. f., 67

PLATYPUS Small & Nash
altus Small, 39
papilliferus Small & Nash, 39
PLEUROTHALLIS *R. Br.*, 84
gelida *Lindl.*, 84
POGONIA *Juss.*, 85
affinis Aust., 70
cubensis Reichb. f., 102
divaricata R. Br., 20
ophioglossoides (*Linn.*) *Ker-Gawl.*, 85
forma albiflora *Rand & Redf.*, 85
var. brachypogon *Fernald*, 85
pendula Lindl., 102
rubensis Reichb. f., 102
trianthophorus BSP., 103
verticillata Nutt., 70
POLYRRHIZA *Pfitz.*, 85
Lindenii (*Lindl.*) *Cogn.*, 85
POLYSTACHYA *Hook.*, 86
luteola (*Sw.*) *Hook.*, 86
minuta Britton, 86
minuta Frappier, 86
minuta *A. Rich. & Gal.*, 87
PONTHIEVA *R. Br.*, 87
Brittonae *Ames*, 87
glandulosa R. Br., 87
racemosa (*Walt.*) *Blake*, 87
racemosa (*Walt.*) *Mohr*, 87
PRESCOTTIA *Lindl.*, 88
myosurus Reichb. f., 88
oligantha (*Sw.*) *Lindl.*, 88
PTEROGLOSSASPIS *Reichb. f.*
ecristata Rolfe, 40
RHYNCHADENIA A. Rich.
cubensis A. Rich., 77
SATYRIUM *Linn.*
elatum Sw., 91
orchioides Sw., 101
repens Linn., 37
spirale Sw., 98
virescens Pers., 52
SAUROGLOSSUM Lindl.
cranichoides Ames, 91
Richardii Ames, 91
SERAPIAS *Linn.*, 88
Austinae (*A. Gray*) *A. A. Eat.*, 88
gigantea A. A. Eat., 13
Helleborine Linn.
α. *latifolia* Linn., 13
latifolia Huds., 13
polystachya Sw., 103
SPATHIGER Small
rigidus Small, 34
SPIRANTHES *L. C. Rich.*, 89
Amesiana Schltr., 98
Beckii *Lindl.*, 89
brevifolia Chapm., 93
brevilabris Lindl., 92
cernua Hook., not L. C. Rich., 98
cernua (*Linn.*) *L. C. Rich.*, 90
γ. *latifolia* Torr., 94
var. ochroleuca (*Rydb.*) *Ames*, 90
var. *parviflora* Chapm., 95
cernua × *gracilis* Ames, 100
cinnabarinus Hemsl., 100
constricta K. Schum., 95
cranichoides (*Griseb.*) *Cogn.*, 91
decipiens Hook., 35
elata (*Sw.*) *L. C. Rich.*, 91
gemmipara Lindl., 97
gracilis (*Bigel.*) *Beck*, 92
graminea *Lindl.*
var. *praecox* BSP., 99
var. *Walteri* A. Gray, 97, 99
Grayi Ames, 89
intermedia Ames, 99
jaliscana S. Wats., 101
laciniata (*Small*) *Ames*, 92
latifolia Torr., 94
longilabris *Lindl.*, 93
lucayana (*Britton*) *Cogn.*, 93

lucida (*H. H. Eat.*) *Ames*, 94
neglecta Ames, 99
odorata (*Nutt.*) *Lindl.*, 95
ovalis *Lindl.*, 95
parviflora Ames, 96
plantaginea Torr., not Lindl., 94
porrifolia *Lindl.*, 96
praecox (*Walt.*) *S. Wats.*, 96
Romanzoffiana *Cham.*, 97
simplex A. Gray, not Griseb., 89
Smallii Schltr., 96
Storeri Chapm., 91
stricta A. Nels., 97
tortilis Chapm., not L.C.Rich., 97
tortilis (*Sw.*) *L. C. Rich.*, 98
unalascensis Spreng., 65
vernalis *Engelm. & Gray*, 99

STENORRHYNCHUS *L. C. Rich.*, 100
cinnabarinus (*La Llave & Lex.*) *Lindl.*, 100
jaliscanus Nash, 101
orchioides (*Sw.*) *L. C. Rich.*, 100
squamulosus Fawc. & Rendle, 101
squamulosus Spreng., 101

TIPULARIA *Lindl.*, 101
discolor (*Pursh*) *Nutt.*, 101
unifolia BSP., 101

TRIORCHIS Millan
Beckii House, 89
cernua Nieuwl., 90
gracilis Nieuwl., 92
Grayi Nieuwl., 89
laciniata House, 93
linearis Nieuwl., 99
longilabris House, 93
ochroleuca Nieuwl., 90
odorata Nieuwl., 95
ovalis Nieuwl., 96
plantaginea Nieuwl., 94
praecox Nieuwl., 97
Romanzoffiana Nieuwl., 98
spiralis House, 98
stricta Nieuwl., 98
triloba House, 95
vernalis House, 99
xyridifolia House, 99

TRIORCHOS Small & Nash
ecristatus Small, 40

TRIPHORA *Nutt.*, 102
cubensis (*Reichb. f.*) *Ames*, 102
pendula Nutt., 102
trianthophora (*Sw.*) *Rydb.*, 102

TROPIDIA *Bl.*, 103
Eatonii Ames, 103
polystachya (*Sw.*) *Ames*, 103

VANILLA *Sw.*, 104
articulata *Northrop*, 104
Eggersii *Rolfe*, 104
fragrans (*Salisb.*) *Ames*, 104
phaeantha *Reichb. f.*, 104
planifolia Andr., 104

Date Due

DEC 1 - 1972			
MAR 3			
FEB 0 3 2002			
JAN 3 1 2002			
PRINTED IN U. S. A.			CAT. NO. 23233

TRENT UNIVERSITY
0 1164 0023805 5

QK495 .O64A5

Ames, Oakes

An enumeration of the orchids of the United States and Canada.

DATE	ISSUED TO

38047